

IRRIGATION DEPARTMENT, BENGAL.

*Abstract statement showing Tollage on Canals in Bengal classed as Major Works for the month of December 1900, as compared with that of the corresponding month of the previous year.*

CANALS.	TOLLAGE, 1900-1901.			TOLLAGE, 1899-1900.		
	During the month.		To end of the month.	During the month.		To end of the month.
	1	2	3	4	5	
<i>Orissa Circle.</i>						
Taldanda Canal System	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
ditto	638 10 3	16,088 5 7	907 4 3	8,232 9 7		
Kendrapara ditto	6,013 9 9	32,514 9 3	4,746 9 0	47,730 12 6		
High Level, Range I	1,152 5 9	7,761 10 9	1,136 4 3	9,033 11 3		
Ditto, " II	249 0 9	1,936 6 6	180 0 9	1,989 5 6		
Ditto, " III	30 3 0	523 2 9	30 14 6	951 6 3		
Jajpur Canal	... 39 8 0	261 14 6	26 5 6	291 4 3		
Total Orissa Circle	... 8,123 5 6	59,086 1 4	7,027 6 3	68,229 1 4		
<i>South-Western Circle.</i>						
Midnapore Canal	9,145 11 0	67,623 15 3	6,834 3 6	72,324 4 0		
Hijili Tidal Canal	2,139 8 0	34,163 3 6	2,191 9 3	38,147 12 3		
Total South-Western Circle	... 11,285 3 0	1,01,787 2 9	9,025 12 9	1,10,472 0 3		
<i>Sone Circle.</i>						
Patna Canal System	768 6 9	10,203 2 2	2,826 3 9	34,254 10 6		
Arrah ditto	216 2 6	10,492 10 0	2,075 8 3	21,820 15 0		
Buxar ditto	459 14 6	7,698 3 3	1,337 6 9	11,918 4 9		
Total Sone Circle	... 1,444 7 9	28,393 15 5	6,239 2 9	67,993 14 3		
<b>GRAND TOTAL</b>	<b>... 20,853 0 3</b>	<b>1,89,267 3 6</b>	<b>22,292 5 9</b>	<b>2,46,694 15 10</b>		

Government Transport Service.

CANAL.	TOLLAGE, 1900-1901.						TOLLAGE, 1899-1900.					
	During the month.			To end of the month.			During the month.			To end of the month.		
	Passen- gers,	Goods,	Total re- ceipts,	Passen- gers,	Goods,	Total re- ceipts,	Passen- gers,	Goods,	Total re- ceipts,	Passen- gers,	Goods,	Total re- ceipts,
1	2	3	4	5	6	7	8	9	10	11	12	13
Orissa Circle.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.
High Level	...	...	...	...	...	...	...	...	...	41,637	2,884	46,349 11 0
Total Orissa Circle	...	...	...	...	...	...	...	...	...	41,637	2,884	46,349 11 0

Assessed Tollage Receipts.

CANALS.	EARNINGS, 1900-1901.				EARNINGS, 1899-1900.			
	During the month.		To end of the month.		During the month.		To end of the month.	
	1	2	3	4	5	6	7	8
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Orissa Canals	...	8,123 5 6	59,086 1 4	7,027 6 3	1,14,578 12 4			
Midnapore Canal	...	9,145 11 0	67,623 15 3	6,834 3 6	72,324 4 0			
Hijili Tidal Canal	...	2,139 8 0	34,163 3 6	2,191 9 3	38,147 12 3			
Sone Canals	...	1,444 7 9	28,393 15 5	6,239 2 9	67,993 14 3			
<b>Total</b>	<b>...</b>	<b>20,853 0 3</b>	<b>1,89,267 3 6</b>	<b>22,292 5 9</b>	<b>2,46,694 15 10</b>			

CALCUTTA,  
The 12th February 1901.

A. H. C. MACCARTHY,  
Under-Secy. to the Govt. of Bengal.

## IRRIGATION DEPARTMENT, BENGAL.

*Abstract Statement showing Tollage on Canals in Bengal classed as Minor Works and Navigation for the month of December 1900, as compared with that of the corresponding month of the previous year.*

CANALS.	TOLLAGE, 1900-1901.			TOLLAGE, 1899-1900.		
	During the month.	To end of the month.	During the month.	To end of the month.		
1	2	3	4	5		
Calcutta and Eastern Canals	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
... ...	31,538 6 6	2,16,009 1 6	29,578 8 6	2,21,639 0 9		
Tolly's Nala ...	7,000 6 9	62,258 3 3	7,650 6 0	62,397 9 6		
Total ...	38,538 13 3	2,78,267 4 9	37,228 14 6	2,84,036 10 3		
Orissa Coast Canal ...	4,637 7 9	33,343 9 0	2,137 6 9	31,243 11 9		
Nadia Rivers ...	5,579 12 6	88,295 1 0	4,496 6 6	92,943 11 0		
GRAND TOTAL ...	48,756 1 6	3,99,905 14 9	43,862 11 9	1,08,224 1 0		

CALCUTTA,  
The 12th February 1901.

A. H. C. MACCARTHY,  
Under-Secy. to the Govt. of Bengal.

## GOVERNMENT OF BENGAL, IRRIGATION DEPARTMENT.

*Approximate Return of Traffic on the Circular and Eastern Canals for the week ending Saturday, the 9th February 1901, as compared with the corresponding week of the previous year.*

NATURE OF CARGO.	WEEK ENDING SATURDAY, THE 9TH FEBRUARY 1901.			WEEK ENDING SATURDAY, THE 16TH FEBRUARY 1900.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy ...	1,545	2,93,675	4,965	1,388	3,83,510	6,327
Jute ...	116	41,500*	599	39	20,950	319
Firewood ...	64	54,125	811	71	63,500	946
Other articles ...	897	2,37,250	3,021	735	1,60,785	2,043
Total ...	2,622	6,29,550	9,896	2,233	6,28,745	9,635

\* Weight by canal measurement—40.162½ maunds.

## BENGAL AND NORTH-WESTERN RAILWAY.

Statement of goods traffic for the month of October 1900, compared with the corresponding period in 1899.

DESCRIPTION OF GOODS.	1899.		1900.		Increase.		Decrease.		Explanation of fluctuations by the Traffic Manager.
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	
I.—Apparel, including drapery, harness, haversack, uniforms, accoutrements, boots and shoes.	.....	.....	.....	.....	.....	.....	.....	.....	
II.—Coal and Coke carried for the Public and Foreign Railways.	673	1,308	319	861	.....	.....	354	447	
III.—Cotton—									
1. Raw .....	63	594	71	733	8	141	.....	.....	
2. Manufactured—									
(a) Twist and European	7	53	8	31	.....	.....	4	23	
(b) Indian .....	276	2,082	231	1,929	.....	.....	39	153	
(c) Piece-goods European	1,263	9,611	1,448	9,595	195	332	.....	.....	
(d) Indian .....	305	2,021	614	4,413	50	2,392	.....	.....	
(e) Others .....	.....	.....	1	.....	.....	.....	.....	.....	
IV.—Chemicals, excepting saltpetre	.....	.....	.....	.....	.....	.....	.....	.....	
V.—Drugs—									
1. Intoxicating, other than opium.	1	18	.....	.....	.....	.....	1	15	
2. Non-intoxicating—									
(a) Medicinal preparations.	.....	.....	.....	.....	.....	.....	.....	.....	
(b) Others .....	48	414	115	657	47	243	.....	.....	
VI.—Dyes and Tans—									
1. Al (Molinda citrifolia)	.....	.....	.....	.....	.....	.....	3	19	
2. Alizarine and aniline dyes.	5	38	2	9	.....	.....	.....	.....	
3. Cutch .....	5	23	3	12	.....	.....	2	11	
4. Indigo .....	7	118	5	85	.....	.....	2	33	
5. Myabolans .....	1	7	2	12	1	5	.....	.....	
6. Tanning barks .....	.....	.....	.....	.....	.....	.....	.....	.....	
7. Turmeric .....	60	579	104	1,213	44	661	.....	.....	
8. Others .....	9	68	15	54	6	.....	.....	14	
VII.—Fodder—									
1. Oiicaka .....	.....	.....	360	1,537	360	1,537	.....	.....	
2. Hay, straw and grass .....	.....	.....	.....	.....	.....	.....	.....	.....	
VIII.—Fruits and vegetables, fresh	.....	.....	637	3,054	637	3,054	.....	.....	
IX.—Grain and Pulse—									
1. Gram and pulse .....	5,962	18,589	2,586	7,416	.....	.....	2,776	11,173	
2. Jawar and bajra .....	45	253	1	2	.....	.....	44	251	
3. Rice { not in the husk .....	2,648	7,382	1,029	4,278	.....	.....	1,009	3,104	
4. Rice { in the husk .....	7,780	30,373	5,787	23,411	.....	.....	1,963	6,962	
5. Wheat .....	5,649	19,370	1,521	5,635	.....	.....	4,128	13,735	
6. Wheat-flour .....	.....	.....	49	332	59	332	.....	.....	
7. Makai .....	3,090	11,076	2,151	6,760	.....	.....	939	4,316	
8. Others .....	16,411	50,475	3,746	13,983	.....	.....	12,715	45,487	
X.—Hides and Skins—									
1. Hides of cattle—									
(a) Dressed or tanned .....	.....	.....	1	10	1	10	.....	.....	
(b) Raw .....	568	2,435	278	1,522	.....	.....	232	913	
2. Skins of sheep and other animals—									
(a) Dressed or tanned .....	6	41	2	13	.....	.....	4	28	
(b) Raw .....	146	588	200	1,343	55	555	.....	5	33
XI.—Horns .....	5	33	.....	.....	.....	.....	.....	.....	
XII.—Hemp (Indian) and other fibres, excluding jute.	.....	.....	.....	.....	.....	.....	.....	.....	
XIII.—Juta—									
1. Raw .....	50	200	34	102	.....	.....	29	94	
2. Gunny-bags and cloth .....	1,088	5,430	909	4,922	.....	.....	179	508	
XIV.—Lao .....	80	202	86	492	6	190	.....	.....	
XV.—Leather—									
1. Unwrought .....	.....	.....	2	31	.....	.....	42	414	
2. Wrought, excepting boots and shoes.	44	445	.....	.....	.....	.....	.....	.....	
XVI.—Liquors—									
1. Ale and Beer .....	6	32	6	27	.....	.....	2	5	
2. Spirits of all kinds, including country spirits .....	12	69	.....	.....	.....	.....	12	69	
3. Wine .....	16	181	25	198	9	17	.....	.....	
4. All other sorts, including toddy and fermenting liquor, other than ale and beer.	.....	.....	.....	.....	.....	.....	.....	.....	
XVII.—Metals—									
1. Brass, unwrought .....	16	107	9	68	.....	.....	7	39	
2. " wrought .....	77	411	132	717	55	300	.....	.....	
3. Copper, unwrought .....	1	4	1	5	.....	.....	1	.....	
4. " wrought .....	6	59	9	80	5	91	.....	.....	
5. Iron and steel—									
(a) Cast .....	.....	.....	28	66	28	66	.....	.....	
(b) Unwrought .....	.....	.....	3	11	5	11	.....	.....	
(c) Wrought .....	.....	.....	287	1,272	287	1,272	.....	.....	
(d) Manufactures .....	460	2,371	206	1,135	.....	.....	254	1,236	
6. Others .....	119	609	97	573	.....	.....	22	96	
XVIII.—Oils—									
1. Kerosine .....	463	1,353	919	3,028	486	2,555	.....	.....	
2. Castor .....	16	1.8	15	91	.....	.....	1	27	
3. Cocanut .....	8	42	31	120	23	78	.....	.....	
4. Mustard and rape .....	.....	.....	16	50	16	50	.....	.....	
5. Others .....	48	555	12	66	.....	.....	30	492	

DESCRIPTION OF GOODS.	1899.		1900.		Increase.		Decrease.		Explanation of fluctuations by the Traffic Manager.
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	
<b>XIX.—Oilseeds—</b>									
1. Castor	428	556	442	378	14	.....	.....	175	
2. Earthnuts	.....	.....	1,000	3,417	.....	.....	2,926	7,412	
3. Linseed	3,925	10,829	57	365	.....	.....	189	525	
4. Poppy	246	888	969	2,895	.....	.....	212	163	
5. Rape and mustard	1,311	2,968	10	43	9	40	.....	.....	
6. Til or jinjili	1	3	.....	.....	.....	.....	.....	.....	
7. Others	3,581	11,195	534	-1,747	.....	.....	3,047	9,448	
<b>XX.—Opium</b>	10	244	8	128	.....	.....	2	116	
<b>XXI.—Paper and Pasteboard</b>	23	151	15	86	.....	.....	8	65	
<b>XXII.—Provisions—</b>									
1. Dried fruits and nuts	75	618	111	1,173	36	555	.....	.....	
2. Ghee	144	942	257	1,541	113	508	.....	.....	
3. Others	1,246	6,682	315	1,792	.....	.....	121	4,890	
<b>XXIII.—Railway Plant and Rolling Stock carried for the Public and Foreign Railways—</b>									
1. Locomotive engines and tenders and parts thereof.	.....	.....	.....	.....	.....	.....	.....	.....	
2. Carriages and trucks and parts thereof.	.....	.....	.....	.....	.....	.....	.....	.....	
3. Materials—									
(a) Steel rails and fish-plates.	.....	.....	.....	.....	.....	.....	.....	.....	
(b) Sleepers and keys of steel and cast-iron.	17	130	2	2	.....	132	15	.....	
(c) Others	159	347	.....	.....	.....	.....	150	347	
<b>XXIV.—Salt</b>	5,213	13,979	6,603	18,263	1,391	4,284	.....	.....	
<b>XXV.—Saltpetre and other saline substances—</b>									
1. Saltpetre	1,278	3,701	1,314	4,112	66	411	.....	.....	
2. Other saline substances	.....	13	20	13	20	.....	.....	.....	
<b>XXVI.—Silk—</b>									
1. Raw—									
(a) Foreign	.....	2	11	.....	.....	.....	2	11	
(b) Indian	.....	.....	.....	.....	.....	.....	.....	.....	
2. Piece-goods—									
(a) Foreign	.....	.....	.....	.....	.....	.....	.....	.....	
(b) Indian	.....	.....	.....	.....	.....	.....	.....	.....	
<b>XXVII.—Spices—</b>									
1. Betelnuts	161	1,194	145	1,062	.....	.....	16	132	
2. Cardamoms	3	20	2	11	.....	.....	1	9	
3. Chillies	53	342	19	100	.....	.....	34	242	
4. Ginger	8	44	10	120	2	76	.....	.....	
5. Pepper	25	205	10	72	.....	.....	15	133	
6. Others	281	2,913	136	1,053	.....	.....	145	1,160	
<b>XXVIII.—Stone and lime</b>	577	1,483	395	811	.....	.....	189	672	
<b>XXIX.—Sugar—</b>									
1. Refined or crystallised, including sugarcandy.	980	4,398	731	4,408	.....	10	249	.....	
2. Unrefined—									
(a) Sugar	1,656	6,233	379	2,628	.....	1,777	3,605		
(b) Gum, rab, jaggery, molasses and other saccharine products.	.....	424	1,753	484	1,753	.....	.....	.....	Less production.
<b>XXX.—Tea—</b>									
1. Foreign	.....	2	16	1	4	.....	.....	1	12
2. Indian	.....	.....	.....	.....	.....	.....	.....	.....	
<b>XXXI.—Tobacco—</b>									
1. Unmanufactured	942	6,242	811	5,282	.....	40	131	.....	
2. Manufactured—									
(a) Cigars	.....	3	87	3	37	.....	.....	.....	
(b) Other sorts	31	148	33	275	2	127	.....	.....	
<b>XXXII.—Wood—</b>									
1. Timber, unwrought	.....	54	136	54	136	.....	.....	.....	
2. Logs	450	549	657	1,089	198	540	.....	.....	
3. Poles	41	72	31	61	.....	10	11	.....	
4. Manufactures	.....	33	191	33	191	.....	.....	.....	
<b>XXXIII.—Wool—</b>									
1. Raw	8	61	1	8	.....	.....	7	53	
2. Manufactured—									
(a) Carpet and rugs	.....	1	10	1	10	.....	.....	.....	
(b) Piece-goods { European	.....	1	8	1	8	.....	.....	.....	
(c) Piece-goods { Indian	15	182	10	119	.....	.....	5	63	
(d) Other sorts of manufactures.	.....	.....	.....	.....	.....	.....	.....	.....	
<b>XXXIV.—All other articles of merchandise—</b>									
1. Indigo-seed	9	153	12	93	3	.....	.....	60	
2. Firewood	6,768	3,700	878	1,377	.....	.....	5,800	2,413	
3. Others not specified above.	2,098	11,005	1,084	6,046	.....	.....	114	4,959	
<b>Total</b>	78,552	2,68,946	43,314	1,66,015	5,133	23,461	40,371	1,20,392	

GORAKHPUR,  
The 21st January 1901.

CHARLES YOUNG,  
For Auditor of Accounts.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 26th January 1901, on 1,837.09 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.				
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.				
							Rs. A. P.	Merchan- dice.	Total.		
Total Traffic for the week ...	(a) 380,439	Rs. A. P. 4,25,231 8 0	Mds. S. 52,07,815 0	Rs. A. P. 8,66,707 9 0	Rs. A. P. 23,595 0 0	Rs. A. P. 13,14,533 15 0	111,255	174,834	256,059		
Or per mile of Railway ...	231 7 6			471 12 6	12 4 10	715 8 10	.....	.....	.....		
For previous 3½ weeks of half-year.	894,128	9,77,609 1 0	1,41,48,186 10	23,07,339 9 0	64,983 0 0	33,49,960 10 0	236,333	457,414	773,767		
Total for 3½ weeks ...	1,274,567	14,02,840 7 0	1,93,56,001 10	31,74,967 2 0	87,587 0 0	46,64,494 9 0	397,588	632,238	10,59,826		
<b>COMPARISON.</b>											
Total for corresponding week of previous year.	329,834	3,52,160 8 1	54,92,050 10	10,88,005 0 4	30,963 12 5	14,71,129 4 10	93,721	195,534	289,256		
Per mile of railway corresponding week of previous year.	.....	205 12 0	.....	635 10 7	18 1 5	839 8 0	.....	.....	.....		
Total for corresponding 3½ weeks of previous year.	1,230,512	13,48,814 11 4	1,92,60,573 0	30,96,448 0 6	1,09,111 15 1	54,54,374 10 11	388,3371	739,209	1,127,436		

(a) The increase is in outward traffic and is due to the greater movements of pilgrims on account of "Magh" mela.

(b) The decrease is chiefly due to heavier upward despatches of food-grains in the corresponding period of 1900.

1901.

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900.

Open miles.	Period.	Coaching Traffic.	Merchandise and Mineral Traffic.		Other earnings.	Total.	Per mile of railway.	Train mileage.
1,837.09	12 days of January	No. of passengers. 534,312	Rs. 5,87,307	Mds. 88,76,032	Rs. 14,02,400	Rs. 42,014	Rs. 20,31,811	Rs. 1,106
1,837.09	Week ended 19th	354,816	8,00,362	52,72,154	10,04,870	22,078	13,18,150	718
1,837.09	" 26th "	380,349	4,25,231	52,07,815	8,66,708	22,595	13,14,534	716
	Totals up to date ...	1,274,567	14,02,840	1,93,56,001	31,74,968	87,587	46,64,495	634
							1,059,826	4 6 5

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900—concluded.

1900.

		No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	No.	Rs. A. P.
1,711.61	13 days of January	596,641	6,65,195	87,39,374	18,36,800	49,519	25,48,514	534,267	4 12 4
1,711.61	Week ended 20th January	320,577	5,31,459	55,37,540	10,71,643	31,629	14,51,731	303,813	4 11 7
1,711.61	" 27th "	322,294	55,2160	54,92,659	10,88,005	30,964	14,71,129	289,257	5 1 4
	Totals up to date ...	1,230,512	13,48,814	1,92,60,573	30,96,448	1,09,112	54,54,374	826	1,127,437
									4 13 5

## TABKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 26th January 1901, on 22.23 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.				
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.				
							Rs. A. P.	Merchan- dice.	Total.		
Total traffic for the week ...	19,826	Rs. A. P. 5,32,713 0	Mds. S. 35,720 20	Rs. A. P. 883 12 0	6 0 0	6,227 9 0	1,061	127	1,188		
Or per mile of railway ...	230 10 9			39 12 0	0 4 4	270 11 1	.....	.....	.....		
For previous 3½ weeks of half-year	55,549	13,31,211 0	97,646 0	2,106 8 0	17 0 0	15,435 3 0	2,783	442	3,925		
Total for 3½ weeks ...	75,375	18,040 8 0	1,33,360 20	2,090 4 0	23 0 0	21,053 12 0	3,844	560	4,413		
<b>COMPARISON.</b>											
Total for corresponding week of previous year ...	21,510	5,216 6 4	72,104 10	1,056 15 0	14 12 9	6,238 2 1	1,637	231	1,298		
Per mile of railway corresponding week of previous year ...	.....	234 10 6	.....	47 8 8	0 10 8	282 13 10	.....	.....	.....		
Total for corresponding 3½ weeks of previous year ...	79,590	18,733 10 6	1,32,540 0	3,062 14 0	40 10 6	21,834 3 0	4,679	1,160	5,239		

## TARKESSUR BRANCH RAILWAY—concluded.

1901.

Abstract of progressive weekly return of all earnings for 1901 in comparison with 1900.

Open mileage.	Period.	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings.	Total.	Per mile of railway.	Train mileage.
22 <sup>23</sup>	12 days of January ...	No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	No.	Rate.
22 <sup>23</sup>	Week ending 19th January ...	32,815	7,786	61,722	1,378	11	9,175	2,037	Rs. A. P.
22 <sup>23</sup>	" " 26th " "	22,734	5,526	35,924	729	6	6,261	1,188	4 8 1
22 <sup>23</sup>	Totals up to date ...	19,826	5,328	35,721	883	6	6,217	1,188	5 4 4
		75,375	18,640	133,567	2,090	23	21,653	4,413	5 3 9
									4 14 6

Abstract of progressive weekly return of all earnings for 1901 in comparison with 1900—concluded.

1900.

Open mileage.	Period.	No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	No.	Rate.
22 <sup>23</sup>	13 days of January ...	38,632	8,509	35,948	1,591	16	10,416	2,345	Rs. A. P.
22 <sup>23</sup>	Week ending 20th January ...	19,749	4,615	14,487	505	10	6,130	1,596	4 7 1
22 <sup>23</sup>	" " 27th " "	21,810	6,216	72,105	1,057	15	6,288	1,298	3 3 5
	Totals up to date ...	79,591	18,730	142,540	3,063	41	21,834	5,239	4 13 6
									4 2 8

## DELHI-UMBALLA-KALKA RAILWAY.

Approximate Return of Traffic for week ended 26th January 1901, on 162.24 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.				
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.		Total.		
							Mds.	Rs. A. P.			
Total traffic for the week ...	14,984	Rs. A. P.	Mds.	Rs. A. P.	Rs. A. P.	Rs. A. P.	7,880	3,216	11,096		
Or per mile of railway ...	11,307 7 0	11,60,115 20	12,507 12 0	23,943 3 0	23,943 3 0	7,880	3,216	11,096	.....		
For previous 2½ weeks of half-year ...	70 1 1	.....	77 1 6	0 6 8	0 6 8	147 0 3	.....	.....	.....		
.....	41,303	34,343 1 0	3,84,681 0	30,293 10 0	178 0 0	64,816 11 0	20,637	9,300	29,946		
Total for 3½ weeks ...	56,287	45,712 8 0	5,44,796 20	42,801 6 0	246 0 0	88,759 14 0	28,517	12,525	41,042		
COMPARISON.											
Total for corresponding week of previous year ...	14,124	10,422 1 5	96,326 20	10,188 7 3	140 2 9	20,720 11 5	7,204	2,481	9,686		
Per mile of railway corresponding week of previous year ...	64 3 10	.....	62 9 10	0 13 10	0 13 10	127 11 6	.....	.....	.....		
Total for corresponding 3½ weeks of previous year ...	56,554	48,103 10 10	3,59,849 10	44,041 15 3	307 6 6	99,453 6 7	27,177	11,645	38,892		

1901.

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900.

Open mileage.	Period.	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings.	Total.	Per mile of railway.	Train mileage.
162 <sup>24</sup>	12 days of January ...	No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	No.	Rate.
162 <sup>24</sup>	Week ended 19th January ...	25,940	23,231	2,42,288	17,745	113	40,680	247	Rs. A. P.
162 <sup>24</sup>	" " 26th " "	15,354	12,114	1,42,393	12,548	65	24,727	152	2 2 4
162 <sup>24</sup>	Totals up to date ...	14,984	11,367	1,60,116	15,508	65	23,943	148	2 3 2
		56,287	45,712	5,44,797	42,801	246	88,759	147	2 2 6
									2 2 7

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900—concluded.

1900.

Open mileage.	Period.	No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	No.	Rate.
162 <sup>24</sup>	13 days of January ...	28,523	26,096	1,85,184	22,085	123	49,294	303	Rs. A. P.
162 <sup>24</sup>	Week ended 26th January ...	14,207	10,685	78,419	11,709	44	23,528	139	2 2 5
162 <sup>24</sup>	" " 27th " "	14,194	10,423	96,326	10,158	140	20,721	128	2 3 3
162 <sup>24</sup>	Totals up to date ...	56,554	48,104	3,59,849	44,012	307	92,453	148	2 6 1

6

## SOUTH BEHAR RAILWAY.

Approximate Return of Traffic for week ended 26th January 1901, on 78.76 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	9,458	Rs. A. P. 4,408 9 0	Mds. S. 54,334 10	Rs. A. P. 3,615 7 0	Rs. A. P. 42 0 0	Rs. A. P. 8,026 0 0	1,779	977	2,756
Or per mile of railway ...	.....	56 11 9	.....	44 10 3	0 8 6	101 14 6	.....	.....	.....
For previous 2½ weeks of half-year ...	20,081	12,685 7 0	1,19,801 20	9,979 6 0	118 0 0	22,782 13 0	4,823	2,696	7,519
Total for 3½ weeks ...	35,539	17,154 0 0	1,74,135 30	13,494 13 0	160 0 0	30,808 13 0	6,602	3,673	10,275
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	10,125	4,974 6 0	60,092 30	4,589 8 0	21 2 3	9,584 1 0	1,539	687	2,226
Per mile of railway corresponding week of previous year ...	.....	63 2 7	.....	58 4 2	0 4 3	121 11 0	.....	.....	.....
Total for corresponding 3½ weeks of previous year ...	39,339	18,498 9 7	2,15,476 30	15,800 6 0	87 9 0	34,386 8 7	5,791	2,795	8,586

1901.

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900.

Open mileage.	Period.	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings.	Total.	Per mile of railway.	Train mileage.
78.76	12 days of January...	Number of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	Rs. A. P.
78.76	Week ended 19th "	16,080	7,558	74,130	5,321	75	12,954	164	4,762 2 11 6
78.76	" 26th "	10,001	5,127	45,663	4,659	43	9,829	125	2,757 3 9 1
	Totals up to date ...	9,458	4,409	54,334	3,515	42	8,026	102	2,756 2 14 7
		35,539	17,154	1,74,135	13,495	160	30,809	195	10,275 3 0 0

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900—concluded.

1900.

Open mileage.	Period.	Number of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	Rs. A. P.
78.76	13 days of January...	18,319	9,099	94,723	6,901	54	16,144	205	4,134 3 14 6
78.76	Week ended 20th "	9,805	4,425	60,658	4,221	12	8,658	110	2,226 3 14 3
78.76	" 27th "	10,125	4,975	67,093	4,588	21	9,584	122	2,226 4 4 11
	Totals up to date ...	39,339	18,498	2,15,477	15,800	87	34,386	113	8,586 4 0 1

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., K.-D., DACCA, AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic and Mileage for the week ended 26th January 1901, on 843 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (including ferry).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	209,230	Rs. A. P. 1,09,420 0 0	Mds. S. 10,97,740 6	Rs. A. P. 1,96,780 0 0	Rs. A. P. 44,350 0 0	Rs. A. P. 3,50,550 0 0	35,532	40,522	76,354
Or per mile of railway ...	248	130 0 0	1,392 0	233 0 0	30 0 0	393 0 0*	...	...	...
For previous 3 weeks of half-year ...	616,100	2,91,200 0 0	29,86,290 0	4,85,570 0 0	34,120 0 0	8,10,890 0 0	99,787	114,444	214,231
Total for 4 weeks ...	825,330	4,00,620 0 0	40,84,030 0	6,82,350 0 0	78,470 0 0	11,61,440 0 0	135,610	154,966	290,585
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	213,548	1,10,625 0 0	13,59,049 0	2,11,489 0 0	56,176 0 0	3,77,690 0 0	35,385	41,832	77,217
Per mile of railway corresponding week of previous year ...	256	133 0 0	1,630 0	253 0 0	47 0 0	432 0 0	...	...	...
Total to corresponding date of previous year ...	820,357	3,09,566 0 0	42,45,459 0	6,77,132 0 0	95,540 0 0	11,72,238 0 0	130,438	158,860	298,277

\* Excluding steamer earnings.

## DACC STATE RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 26th January 1901, on 86 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	92,080	Rs. A. P. 7,500 0 0	Mds. S. 54,600 0	Rs. A. P. 4,940 0 0	Rs. A. P. 129 0 0	Rs. A. P. 12,569 0 0	2,750	2,986	5,736
Or per mile of railway ...	257	87 0 0	635 0	58 0 0	1 0 0	146 0 0	...	...	...
For previous 3 weeks of half-year ...	62,106	23,140 0 0	1,61,520 0	16,820 0 0	480 0 0	40,390 0 0	7,590	6,042	13,638
Total for 4 weeks ...	91,180	30,640 0 0	2,16,120 0	21,760 0 0	550 0 0	52,950 0 0	10,340	9,028	19,368
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	24,080	7,974 0 0	23,430 0	3,016 0 0	2,025 0 0	13,043 0 0	2,888	1,000	3,888
Per mile of railway corresponding week of previous year ...	280	93 0 0	388 0	35 0 0	24 0 0	352 0 0	...	...	...
Total to corresponding date of previous year ...	92,442	29,361 0 0	1,29,942 0	13,062 0 0	2,328 0 0	44,751 0 0	11,271	4,397	15,668

## COOCH BEHAR STATE RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 26th January 1901, on 33.73 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (including ferry).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	1,500	Rs. A. P. 610 0 0	Mds. S. 9,810 0	Rs. A. P. 850 0 0	Rs. A. P. 50 0 0	Rs. A. P. 1,510 0 0	375	1,407	(a) 1,782
Or per mile of railway ...	44	18 0 0	292 0	25 0 0	1 0 0*	44 0 0*	...	...	...
For previous 3 weeks of half-year ...	4,510	1,590 0 0	22,380 0	2,130 0 0	120 0 0	4,240 0 0	1,030	3,408	4,408
Total for 4 weeks ...	6,010	2,603 0 0	32,220 0	2,080 0 0	170 0 0	5,750 0 0	1,405	4,875	6,280
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	1,537	782 0 0	18,354 0	1,584 0 0	148 0 0	2,514 0 0	162	936	1,698
Per mile of railway corresponding week of previous year ...	35	24 0 0	553 0	48 0 0	...	72 0 0	...	...	...
Total to corresponding date of previous year ...	6,337	2,741 0 0	44,531 0	3,960 0 0	580 0 0	7,281 0 0	722	3,910	4,632

\* Excluding coaching ferry.  
(a) Includes ballast train-miles, 1,152.

## MYMENSINGH-JAGANNATHGANJ RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 26th January 1901 on 53.37 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	9,140	Rs. A. P. 2,380 0 0	Mds. S. 17,000 0	Rs. A. P. 810 0 0	Rs. A. P. 30 0 0	Rs. A. P. 3,350 0 0	1,104	1,062	* 2,166
Or per mile of railway ...	171	44 0 0	319 0	16 0 0	1 0 0	61 0 0	...	...	...
For previous 3 weeks of half-year ...	25,340	5,750 0 0	55,160 0	2,670 0 0	40 0 0	8,460 0 0	3,004	1,024	4,028
Total for 4 weeks ...	32,480	8,130 0 0	73,160 0	3,510 0 0	70 0 0	11,710 0 0	4,108	2,086	6,194
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	6,005	2,029 0 0	41,131 0	2,327 0 0	8 0 0	4,394 0 0	963	521	1,484
Per mile of railway corresponding week of previous year ...	148	38 0 0	702 0	44 0 0	...	82 0 0	...	...	...
Total to corresponding date of previous year ...	32,780	8,448 0 0	69,600 0	4,089 0 0	54 0 0	12,591 0 0	3,837	3,190	7,027

\* Includes ballast train-miles 376.

## BRAHMAPUTRA-SULTANPUR RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 26th January 1901 on 59 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	5,420	Rs. A. P. 1,960 0 0	Mds. s. 15,430 0	Rs. A. P. 1,480 0 0	Rs. A. P. 30 0 0	Rs. A. P. 3,470 0 0	1,260	420	1,680
Or per mile of railway ...	92	33 0 0	262 0	25 0 0	1 0 0	59 0 0	...	...	...
For previous 3 weeks of half-year ...	16,920	4,720 0 0	43,060 0	4,320 0 0	60 0 0	9,100 0 0	3,450	1,568	5,048
Total for 4 weeks ...	22,340	6,680 0 0	58,490 0	5,800 0 0	90 0 0	12,570 0 0	4,740	1,068	6,728
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	2,155	681 0 0	41,537 0	1,306 0 0	10 0 0	1,097 0 0	165	886	1,051
Per mile of railway corresponding week of previous year ...	86	28 0 0	1,678 0	53 0 0	...	81 0 0	...	...	...
Total to corresponding date of previous year ...	10,811	3,303 0 0	1,04,023 0	4,025 0 0	42 0 0	7,370 0 0	645	3,232	3,897

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., K.-D., DACCA, AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic and Mileage for the week ended 2nd February 1901, on 853 $\frac{1}{2}$  miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (including ferry).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	236,000	Rs. A. P. 1,31,860 0 0	Mds. s. 1,100,820 0	Rs. A. P. 1,68,000 0 0	Rs. A. P. 10,150 0 0	Rs. A. P. 3,10,010 0 0	35,736	30,447	75,183
Or per mile of railway ...	277	155 0 0	1,291 0	197 0 0	1 0 0	353 0 0*	...	...	...
For previous 4 weeks of half-year ...	825,330	4,09,620 0 0	4,084,030 0	6,83,350 0 0	78,470 0 0	11,61,440 0 0	135,619	154,966	290,585
Total for 5 weeks ...	1,061,330	5,32,480 0 0	5,184,850 0	8,50,350 0 0	88,630 0 0	14,71,450 0 0	171,335	194,413	365,768
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	209,612	1,03,765 0 0	1,161,171 0	1,71,527 0 0	15,167 0 0	2,90,699 0 0	35,835	41,015	76,850
Per mile of railway corresponding week of previous year ...	251	125 0 0	1,392 0	206 0 0	1 0 0	332 0 0	...	...	...
Total to corresponding date of previous year ...	1,038,960	5,03,331 0 0	5,406,630 0	8,48,959 0 0	1,10,647 0 0	14,82,937 0 0	175,243	199,884	375,127

\* Excluding steamer earnings.

† Increase is due to the opening of the British Section of O. B. S. Railway up to Jainti from 1st February 1901.

## DACCA STATE RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 2nd February 1901, on 86 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	29,800	Rs. A. P. 10,360 0 0	Mds. s. 56,160 0	Rs. A. P. 5,430 0 0	Rs. A. P. 460 0 0	Rs. A. P. 16,250 0 0	2,920	2,546	5,466
Or per mile of railway ...	347	121 0 0	653 0	63 0 0	5 0 0	189 0 0	...	...	...
For previous 4 weeks of half-year ...	91,180	30,640 0 0	2,16,120 0	21,760 0 0	550 0 0	53,950 0 0	10,340	9,928	19,368
Total for 5 weeks ...	120,980	41,000 0 0	2,72,280 0	27,190 0 0	1,010 0 0	69,200 0 0	13,260	11,574	24,834
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	22,275	7,046 0 0	24,501 0	2,577 0 0	93 0 0	9,718 0 0	2,964	1,900	3,964
Per mile of railway corresponding week of previous year ...	259	82 0 0	285 0	30 0 0	1 0 0	113 0 0	...	...	...
Total to corresponding date of previous year ...	114,717	36,407 0 0	1,58,443 0	15,639 0 0	2,421 0 0	54,467 0 0	114,235	5,397	19,632

## COOCH BEHAR STATE RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 2nd February 1901, on 33.73 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (including ferry).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	1,520	Rs. A. P. 670 0 0	Mds. S. 8,100 0	Rs. A. P. 600 0 0	Rs. A. P. 40 0 0	Rs. A. P. 1,310 0 0	295	1,295	(a) 1,500
Or per mile of railway ...	45	20 0 0	240 0	18 0 0	.....	38 0 0*	.....	.....	.....
For previous 4 weeks of half-year ...	6,010	3,600 0 0	32,220 0	2,980 0 0	170 0 0	5,750 0 0	1,405	4,875	6,280
Total for 5 weeks ...	7,530	3,270 0 0	40,320 0	3,590 0 0	210 0 0	7,060 0 0	1,700	6,170	7,870
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	1,527	652 0 0	14,406 0	988 0 0	214 0 0	1,854 0 0	195	891	1,096
Per mile of railway corresponding week of previous year ...	46	19 0 0	434 0	38 0 0	3 0 0	52 0 0	.....	.....	.....
Total to corresponding date of previous year ...	7,585	3,393 0 0	55,937 0	4,948 0 0	795 0 0	9,186 0 0	917	4,801	5,719

\* Excluding coaching ferry.

(\* Includes ballast train miles 960.

## MYMENSINGH-JAGANNATHGANJ RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 2nd February 1901, on 53.37 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	10,270	Rs. A. P. 2,520 0	Mds. S. 17,530 0 0	Rs. A. P. 840 0 0	Rs. A. P. 20 0 0	Rs. A. P. 3,380 0 0	1,120	808	1,928*
Or per mile of railway ...	192	47 0	328 0 0	16 0 0	.....	63 0 0	.....	.....	...
For previous 4 weeks of half-year ...	32,480	8,130 0	73,160 0 0	3,510 0 0	70 0 0	11,710 0 0	4,108	2,086	6,194
Total for 5 weeks ...	42,750	10,650 0	90,690 0 0	4,350 0 0	90 0 0	15,090 0 0	5,228	2,894	8,122
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	6,823	1,654 0	30,183 0 0	1,949 0 0	14 0 0	3,617 0 0	974	550	1,524
Per mile of railway corresponding week of previous year ...	126	31 0	559 0 0	37 0 0	.....	68 0 0	.....	.....	...
Total to corresponding date of previous year ...	39,603	10,102 0	99,783 0 0	6,038 0 0	68 0 0	16,298 0 0	4,811	3,740	8,551

\* Includes ballast train miles 444.

## BRAHMAPUTRA-SULTANPUR RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 2nd February 1901, on 59 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	6,120	Rs. A. P. 1,840 0 0	Mds. S. 19,340 0	Rs. A. P. 1,760 0 0	Rs. A. P. 30 0 0	Rs. A. P. 3,630 0 0	830	1,186	(a) 2,016
Or per mile of railway ...	104	31 0 0	328 0	30 0 0	1 0 0	62 0 0	.....	.....	.....
For previous 4 weeks of half-year ...	22,340	6,080 0 0	58,490 0	5,800 0 0	90 0 0	12,870 0 0	4,740	1,988	6,728
Total for 5 weeks ...	28,460	8,520 0 0	77,830 0	7,560 0 0	120 0 0	16,200 0 0	5,570	3,174	8,754
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	1,947	633 0 0	26,375 0	1,358 0 0	8 0 0	1,900 0 0	162	1,143	1,305
Per mile of railway corresponding week of previous year ...	79	26 0 0	1,070 0	55 0 0	.....	81 0 0	.....	.....	...
Total to corresponding date of previous year ...	12,758	3,996 0 0	131,098 0	5,385 0 0	50 0 0	9,369 0 0	807	4,395	5,202

(a) Includes ballast train miles 336.

## BENGAL CENTRAL RAILWAY COMPANY, "LIMITED."

Approximate Return of Traffic and Mileage for the week ended 26th January 1901, on 139 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	28,475	14,949 0 0	50,765 0	4,569 0 0	10,940 0 0	39,458 0 0	4,552	2,708	7,260
Or per mile of railway ...	219	115 0 0†	430 0	33 0 0	143 0 0	231 0 0	.....	.....	...
For previous 3 weeks of half-year ...	86,397	37,992 0 0	1,83,678 0	13,183 0 0	1,017 0 0	52,191 0 0	12,361	7,614	19,975
Total for 4 weeks ...	114,872	52,941 0 0	2,43,443 0	17,731 0 0	20,957 0 0	91,649 0 0	16,913	10,322	27,235
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	30,555	13,517 0 0	86,288 0	6,308 0 0	10,535 0 0	30,360 0 0	4,841	3,336	8,177
Per mile of railway corresponding week of previous year ...	235	104 0 0	621 0	45 0 0	76 0 0	225 0 0	.....	.....	...
Total to corresponding date of previous year ...	122,518	50,488 0 0	2,30,814 0	21,730 0 0	11,501 0 0	83,719 0 0	18,039	10,173	29,112

† Coaching traffic calculated on 130 miles only.

## BENGAL AND NORTH-WESTERN RAILWAY.

Approximate Return of Traffic for the week ending 2nd February 1901, on (a) 1,180 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boat.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week on (a) 1,180 miles open ...	160,590	68,530	6,80,990	1,00,940	16,990	(b) 1,99,460	30,631	(c) 30,105	60,730
Or per mile of railway ...	136'09	58'07	592'19	90'63	14'40	163'10	.....	.....	...
For previous 3½ weeks of half-year ...	518,020	2,26,940	21,95,720	2,92,870	56,850	5,76,160	110,959	99,890	210,840
Total for 4½ weeks ...	678,610	2,85,470	28,82,710	3,99,810	73,340	7,68,620	141,590	129,995	271,585
<b>COMPARISON.</b>									
Total for corresponding week of previous year on 1,056 miles open ...	180,570	55,616	6,73,480	88,854	12,809	1,57,279	28,348	(d) 31,024	59,372
Per mile of corresponding week of previous year ...	150'34	51'26	620'73	81'89	11'81	144'96	.....	.....	...
Total to corresponding date of previous year ...	596,044	2,47,298	10,42,801	4,09,966	72,840	7,30,104	134,234	146,270	280,604

(a) 40'00 miles Sahebpur-Kamal Junction to thana Bihpur re-opened and 21'25 miles thana Bihpur to Kursela opened on 1st February 1901. The average mileage of the week is shown in this return.

(b) Increase due to increased mileage and improved traffic generally.

(c) Includes 2,788 miles of ballast trains run on open line.

(d) " 3,876 "

## SEGOWLIE-RAKSAUL BRANCH RAILWAY.

(WORKED BY THE B. &amp; N.-W. RAILWAY.)

Approximate Return of Traffic for week ending 2nd February 1901, on 18 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	No.	Rs.	Mds.	Rs.	Rs.	Rs.			
Total traffic for the period on 18 miles open ...	1,866	297	11,396	876	36	900	365	130	504
Or per mile of railway ...	103'67	10'50	633'11	33'90	2'00	50'50	.....	.....	..
For previous 3½ weeks of half-year ...	6,801	1,295	35,777	1,945	208	2,878	3,001	385	1,385
Total for 4½ weeks ...	9,457	1,562	47,173	1,921	304	3,787	1,366	524	1,820
<b>COMPARISON.</b>									
Total for corresponding week of previous year on 18 miles open ...	1,267	255	6,812	200	11	490	173	74	552
Per mile of corresponding week of previous year ...	70'39	14'15	378'44	11'14	0'62	25'91	.....	.....	...
Total to corresponding date of previous year ...	6,088	1,154	39,381	1,112	45	2,291	799	425	1,224

## SEGOWLIE-RAKSAUL BRANCH RAILWAY.

(WORKED BY THE B. &amp; N.W. RAILWAY.)

Audited Return of Traffic for week ending 22nd December 1900, on 18 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.				
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.		Total.		
							No.	Rs. A. P.			
Total traffic for the week on 18 miles open	2,234	400 7 5	11,670	387 15 7	117 12 0	945 3 0	163	125	288		
Or per mile of railway	124 11	27 12 0	648 23	18 3	6 8 8	52 8 2	.....	.....	.....		
For previous 24 weeks of half-year	28,288	4,704 2 5	1,41,253	3,701 11 2	241 1 0	8,646 14 7	3,619	1,439	5,058		
Total for 25 weeks	36,522	5,203 9 10	1,59,923	4,029 10 9	358 13 0	9,593 1 7	3,782	1,564	5,346		
<b>COMPARISON.</b>											
Total for corresponding week of previous year on 18 miles open	1,436	282 0 8	4,816	145 0 0	16 12 0	443 12 8	206	46	262		
Per mile of railway corresponding week of previous year	79 78	15 10 8	267 56	8 0 11	0 14 11	24 10 6	.....	.....	.....		
Total to corresponding date of previous year	9,029	2,070 2 6	90,515	2,611 3 0	224 1 0	4,905 0 6	1,544	724	2,268		

## ASSAM-BENGAL RAILWAY.

Approximate Return of Traffic for the week ended 26th January 1901 on 397 miles open for all descriptions of traffic, and an additional 181 miles for goods and parcels traffic only.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.				
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.		Total.		
							Rs. A. P.	Mds.			
Total traffic for the week	30,650	20,915 0 0	1,98,569 0	12,486 0 0	2,337 0 0	35,738 0 0	3,689	7,472	11,161		
Or per mile of railway	77 20	52 68	343 54	21 60	4 04	78 32	9 29	12 93	22 22		
For previous 3 weeks of half-year	90,043	54,824 0 0	5,63,913 0	42,031 0 0	2,109 0 0	98,961 0 0	9,398	23,043	32,441		
Total for 4 weeks	120,693	75,739 0 0	7,62,482 0	54,517 0 0	4,43 0 0	1,34,690 0 0	13,087	30,515	43,802		
<b>COMPARISON.</b>											
Total for corresponding week of previous year	28,775	18,048 0 0	1,86,616 0	13,504 0 0	2,708 0 0	34,260 0 0	3,108	7,485	10,593		
Per mile of railway corresponding week of previous year	73 66	45 58	451 65	31 19	6 24	82 94	7 85	17 25	26 10		
Total to corresponding date of previous year	118,112	73,473 0 0	7,72,347 0	53,073 0 0	4,750 0 0	1,31,896 0 0	12,678	30,282	42,960		

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Assam-Bengal Railway.

RECEIPTS FOR WEEK ENDING 26TH JANUARY 1901.			RECEIPTS FOR WEEK ENDING 27TH JANUARY 1901.			TOTAL RECEIPTS FROM 1ST APRIL 1900 TO 26TH JANUARY 1901.		TOTAL RECEIPTS FROM 1ST APRIL 1899 TO 27TH JANUARY 1900.		Total increase in 1901.	Total decrease in 1901.	
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
578	Rs. 35,738	Rs. 78 32	Rs. 434	Rs. 34,260	Rs. 82 94	Rs. 578	13,90,353	.....	Rs. 13,04,777	.....	Rs. 85,376	.....

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

Approximate earnings for the week ending 2nd February 1901	...	...	Rs. 10,917 0 0
Audited earnings for the corresponding period of 1900	...	...	16,721 0 0
Decrease	...	...	5,804 0 0
Receipts per mile for the week ending 2nd February 1901	...	...	214 0 11
Ditto for the corresponding period of 1900	...	...	327 13 10
Decrease	...	...	113 12 11
Receipts from 1st January to 2nd February 1901	...	...	42,174 0 0
Ditto for the corresponding period of 1900	...	...	58,472 0 0
Decrease	...	...	16,298 0 0

Printed at the Printing Office, and published by the Book Depôt, of the Bengal Secretariat, Writers' Buildings, in the City of Calcutta, on 13th February 1901.



SUPPLEMENT TO  
**The Calcutta Gazette.**

WEDNESDAY, FEBRUARY 20, 1901.

OFFICIAL PAPERS.

[Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by post.]

## WORKING OF THE INDIAN FACTORIES ACT DURING 1899.

No. 906.

The 19th February 1901.—The following is published for general information.

F. A. SLACKE,  
*Secy. to the Govt. of Bengal.*

No. 2790, dated Calcutta, the 21st August 1900.

From—F. A. SLACKE, Esq., Secy. to the Govt. of Bengal, General Dept.,  
To—The Secretary to the Government of India, Home Department.

I AM directed to submit the report on the working of the Indian Factories Act, XV of 1881, as amended by Act XI of 1891, in Bengal during the year 1899. The prescribed statements, Forms I and II, are appended.

2. *Number of factories and system of work.*—The total number of factories actually at work at the close of the year 1898 was 181,\* excluding a factory at Jessore which remained closed throughout the year. Nineteen factories were brought under the Act during the year under report, viz., one in Calcutta, one in Howrah, five in the 24-Parganas, six in Pabna, five in Dacca,

\* Last year the number was shown as 180. Two jute presses in Howrah were shown as one factory, hence the mistake last year.

and one in Darbhanga. One factory at Jessore remained closed throughout the year, and two factories in the 24-Parganas and four in Dacca did not work during 1899. Thus out of 201 factories, including the one at Jessore referred to, that were on the list in 1899, 193 factories were actually at work at the close of the year, excluding one factory in the 24-Parganas that was removed from the list during the year. In 95 factories work was carried on by shifts or sets; in 76 by midday stoppages; in eight by combination of shifts and midday stoppages; and in 15 by other means. The number of factories exempted from the rule requiring a Sunday or weekly holiday was 36 as against 33 in the previous year. The average daily number of operatives in the mills aggregated, men, women and children, 173,487 as compared with 165,027 in 1898. The details for both years are given in the table below comparing these figures with those for the year 1893 when the factory report was submitted for the first time:—

		1899.	1898.	1893.
Calcutta	...	5,268	4,892	5,343
Burdwan	...	3,397	3,119	2,459
Midnapore	...	83	82	98
Hooghly	...	21,677	18,650	12,913
Howrah	...	41,531	39,400	28,144
24-Parganas	...	79,243	80,879	72,833
Nadia	...	70	65	90
Jessore	...	...	...	78
Kajshahi	...	550	456	384
Darjeeling	...	110	110	100
Rangpur	...	842	848	572
Pabna	...	350	119	3,572
Dacca	...	9,683	6,871	5,973
Patna	...	285	330	253
Shahabad	...	913	818	904
Saran	...	1,199	1,113	273
Darbhanga	...	989	751	379
Monghyr	...	6,834	5,226	4,898
Bhagalpur	...	440	460	449
Purnea	...	250	100	...
Cuttack	...	337	368	258
Chittagong	...	436	370	...
Total	...	173,487	165,027	139,973

3. *Inspections.*—Twenty-nine factories were inspected once, 41 factories twice, 77 thrice and 52 more than three times. Only one factory (in Jessore) and another in Darbhanga were not inspected during the year. It is reported that the results of inspections were generally satisfactory, and that the suggestions of inspecting officers as regards the fencing of machinery, the supply of good drinking water, sanitary arrangements, ventilation, the employment of women and children, the conservancy and other matters of importance, were readily attended to by the Managers of Factories.

4. *Sanitary arrangements and ventilation.*—The sanitary condition of the factories and the sanitary arrangements in them continued to be satisfactory. The buildings were, as a rule, well ventilated, and proper steps were taken by Mill Managers to keep them clean.

5. *Quarters for operatives.*—From the reports received, it appears that the state of things in this matter is much the same as was reported last year. Owners of the larger factories in the Presidency Division provide coolie lines for some of their operatives, the sanitary condition of which is reported to be good. The huts are well raised, drained and limewashed, whenever required, and are daily inspected by the medical officers attached to the mills. The state of the huts occupied by operatives in *bustees* outside mill compounds is, however, very different. On this subject Major Gibbons, Superintendent, Campell Medical Hospital, writes as follows:—

These *bustees* are generally in a very insanitary state; the huts greatly overcrowded. In Cossipore and Chitpur there are thirteen jute presses. During the jute season thousands of coolies, men and women, are required for sorting and preparing jute for baling. These people mostly lodge in the *bustees* near the presses, and consequently in the unhealthiest

season the overcrowding is excessive. In a former annual report I suggested that the municipality should provide lodging-houses for the use of these coolies on payment. The jute presses cannot be expected to provide accommodation for coolies employed in sorting and preparing jute for baling. These people are not engaged by the presses, but by the owners of jute, and go from one press to another as work offers. Land is so costly in the neighbourhood of factories in this district that the expenditure necessary to house the operatives is not likely to be undertaken by the proprietors.

The Commissioner of the Presidency Division adds:—

The same state of things exists in the neighbourhood of the mills elsewhere. The number of operatives in the large mills runs to thousands, and even these factories, which spend large sums on model dwellings, are unable to provide accommodation for more than a small percentage of their hands. The bulk of the coolies for whom no such accommodation can be provided huddle together in high-rented hovels in filth and discomfort.

The Civil Medical Officer of Serampore states that the men employed in the factories of that subdivision are for the most part low class up-country people to whom the rules of sanitation required under urban conditions are unknown, and that it is they who are mainly responsible for the insanitary condition of their quarters. In the district of Howrah it is reported that, with the exception of a small portion of the operatives, who have accommodation provided by their employers, the mill hands live in poor huts clustered together on undrained ground with only narrow passages between them. These habitations are a source of danger to the town. The accommodation, however dirty and miserable, is only what the operatives have always been accustomed to in their own native villages. It does not present itself to them in the light of hardship, and there is no spontaneous desire amongst them for decent and cleanly living. The necessity for very special attention to the conservancy of these crowded areas will be brought to the notice of the municipalities concerned and of the officers who supervise them.

6. *Vaccination of operatives.*—As a rule no one is admitted into a factory unless he has been vaccinated. The Magistrate of Howrah, Mr. F. W. Duke, has made the following remarks on this subject:—

However, owing to the extensive fluctuations of adult population with immigration from districts where vaccination seems to be rare, a considerable proportion of the mill population is always unprotected, and when small-pox appears, it is always severe and fatal in its effects. I see no reason to hope that there is an improvement in the policy of employers of labour. Too often the only feeling seemed to be a desire that the labourers should not be disturbed or excited at whatever cost of danger to themselves and the rest of the community this quiescence might be purchased.

7. *Water-supply.*—The water-supply in most factories was, as reported in previous years, generally satisfactory.

8. *General health of the operatives.*—This was good during the year. No disease of any kind occurred, except in some of the factories in the Presidency Division, in which during the autumn and the beginning of the cold weather malarial fever was prevalent.

9. *Wages and general condition of the operatives.*—The rates of wages paid to operatives remained almost unchanged everywhere, except at the pottery works at Raniganj, where the carpenters were paid at somewhat higher rates. The rates of wages paid to the operatives employed in the factories at Howrah are considered by the Magistrate, Mr. Duke, to be generally higher than those paid to the labourers of the same class in the private market. Mr. Duke is of opinion that the higher rates of wages paid in mills have had the effect of appreciably raising the rates of wages outside.

10. *Employment of women and children.*—The law and rules regarding the employment of women and children were generally observed, light work being given to them. In a few instances, however, boys under age are believed to have been employed. In Howrah, while inspecting the Fort Gloster Jute Mill, the Magistrate found a boy of six years of age working, the explanation being that he had come with somebody's food, but the real object with which the boy was brought was to teach him work and procure him employment the moment the Medical Officer gave him his age certificate. In one of his inspections of the Jamalpur Railway Workshop, the Magistrate of Monghyr saw several boys who appeared under age working, and in Patna

also some boys under fourteen years of age were found at work. Several fatal accidents having in previous years happened in jute mills to women working at the softeners, the suggestion made by the Special Inspector of Factories last year that women should not be employed at these machines, at least at the feed-end, was commended to the Managers concerned. The Lieutenant-Governor is pleased to hear that all of them have agreed to discontinue this dangerous practice in future.

11. *Fencing of machinery.*—The machinery in the factories is generally reported to have been properly fenced. The following remarks of the Special Inspector of Factories will be brought to the notice of the Managers of Mills:—

I wish to call attention to certain types of accidents that during the past eight years have from time to time occurred in factories, and which are quite unknown to the majority of mill managers and workshop superintendents with years' mechanical experience. As these accidents could easily be prevented, they should, I think, be widely circulated for information.

I need hardly state that any one possessing the most elementary knowledge of mechanics will at once perceive that a small hole drilled into any hollow portion of machinery when being heated would have prevented these serious and fatal accidents.

- (1) The first one occurred in the workshop of the India General Steam Navigation Company at Kidderpore. A large marine piston was clamped to an iron bed-plate for the purpose of removing the piston-rod by expanding the piston. A fire was lighted below the piston, which shortly after burst with terrific force, killing one man and injuring several.
- (2) A hollow pump-plunger that had been lying on the scrap heap of a jute mill was thrown into the cupola to melt. This shortly after burst, and two men engaged in feeding the cupola were badly burnt.
- (3) A pump-plunger rod was bent in the Cawnpore Ice Works. This was placed on the fire attached to the plunger to straighten. The plunger burst, and killed one man.
- (4) A pump-plunger was heated for a similar purpose in the Jhansi works of the Indian Midland Railway, which burst. One man was so seriously injured that he eventually died.
- (5) On two occasions hollow sugar-mill rollers were placed on the fire to remove the worn or broken steel spindles by expansion. These (on two separate occasions) burst, a portion going through the corrugated roof, but fortunately no one was hit by the flying portions.

I feel sure that if these accidents were generally known to the supervising staff in shops, they would naturally have taken the precaution of drilling a small hole for the escape of steam, as the expense and time incurred in doing so would be trifling. It is evident that moisture finds its way into these hollow castings whether working under pressure or not.

12. *Accidents.*—The number of accidents that occurred during the year was 535 as compared with 553 and 651 during the two preceding years. Two hundred and one were of a serious nature and 310 were of a slight nature; and 24 proved fatal, or four less than in the previous year. The following is the list of the more notable of the fatal accidents:—

- (1) One man was killed in the Kharda Jute Mill by his clothing becoming entangled on the shaft of a measuring machine.
- (2) One man was killed in the Central Jute Mill by a bale of jute falling on him.
- (3) One man was killed at the Cossipur Shell Factory when adjusting a belt. The belt lapped the shaft and carried the man with it.
- (4) A boy was killed in the Kanchrapara Shop yard when shunting wagons. The boy's head was jammed between two buffers.
- (5) A man in the Shambnagore Jute Mill fell from a bamboo scaffolding and received internal injuries from which he died.
- (6) A man was killed at the Titagarh Paper Mill whilst engaged in feeding paper. His arm was caught between the dry felt and cylinder.
- (7) A man was killed at the Kharda Jute Mill when working in the jute godown. He fell a distance of some sixteen feet, which proved fatal.
- (8) One man was killed in the New Ring Mill near Ulubaria, his body being crushed between the rollers of a spinning frame.
- (9) One accident occurred in the National Jute Mill. He was run over by a loaded open truck, and received injuries from which he died.
- (10) A man was killed in the Delta Jute Mill, due to his *dhoti* catching on a shaft when adjusting a belt. He was carried round the shaft.

- (11) A man was killed at the Imperial Paper Mill when engaged in working at No. 3 paper-making machine.
- (12) A woman was killed at the Imperial Paper Mill by falling into a grass boiler.
- (13) A man was killed at the Central Jute Mill when engaged in repairing a belt. A loose cloth round his neck caught on the shaft, breaking his neck.
- (14) A woman died at the Bally Paper Mill. She was struck on the head by a piece of machinery which had broken.

13. *Prosecutions.*—There was only one prosecution in the 24-Parganas during the year. On the recommendation of the Deputy Commissioner of Police, the Manager of the Surah Jute Mill was prosecuted under section 15 (i) of the Factories Act for neglecting to send notice of an accident, but he was acquitted under section 13 of the Act, the injury being proved to be of more than 48 hours' standing.

## WEATHER AND CROP REPORT.

For the week ending the 18th February 1901.

**Burdwan.**—Rainfall at Sadar 1.95, Kalna 1.37, Katwa 1.64, Raniganj 1.43. Weather seasonable. Pressing of sugarcane and threshing of *aman* continue. Fodder and water sufficient. Common rice sells as follows:—

	Srs.			
Sadar	...	...	...	12
Kalna	...	...	...	10 $\frac{1}{2}$
Katwa	...	...	...	12 $\frac{1}{2}$
Raniganj	...	...	...	12 $\frac{1}{2}$

} per rupee.

**Birbhum.**—Rainfall at Sadar 0.91, Rampur Hât 0.49. Weather cloudy. *Rabi* crops doing well. Sugarcane being pressed. Price of rice at Sadar 12 seers and at Rampur Hât 14 seers per rupee. Fodder sufficient.

**Bankura.**—Rainfall at Bankura 2.81, Vishnupur 3.24. Weather generally cloudy. Pressing of sugarcane continues. *Rabi* plants doing well. Fodder and water sufficient. No cattle-disease reported. Price of common rice at Bankura 11 seers 14 chitaks and at Vishnupur 12 seers per rupee.

**Midnapore.**—Rainfall at Sadar 3.42, Contai 4.20, Tamluk 3.12, Ghatal 2.62. *Aman* being harvested and sugarcane pressed. Common rice sells as follows:—

	Srs.			
Sadar	...	...	...	14
Contai	...	...	...	13
Tamluk	...	...	...	11
Ghatal	...	...	...	12 $\frac{1}{2}$

} per rupee.

**Hooghly.**—Rainfall at Sadar slight, Serampore 1.39, Arambagh 2.45. Reaping of *rabi* continues. Fodder and water sufficient. Common rice sells at 10 seers 9 chitaks per rupee.

**Howrah.**—Rainfall at Sadar 1.68, Ulubaria 2.05. Weather seasonable. Fodder and water sufficient. Common rice sells at 10 $\frac{1}{2}$  seers per rupee.

**24-Parganas.**—Rainfall at Sadar 1.87, Barasat 2.30, Basirhat 1.36, Diamond Harbour 2.01. Weather cloudy and rainy. Prospect of standing crop not good. Lands are being ploughed for *aus* paddy and jute. *Rabi* crops are being harvested. No cattle-disease. Fodder and water sufficient. Common rice sells as follows:—

	Srs. Ch.			
Sadar	...	...	...	10 3
Barasat	...	...	...	10 0
Basirhat	...	...	...	10 0
Diamond Harbour	...	...	...	10 8

} per rupee.

**Nadia.**—Rainfall at Sadar 1.37, Kushtia 0.81, Meherpur 1.20, Chuadanga 1.48, Ranaghat 1.84. Weather seasonable. The rain has done good to the standing crops. Harvesting of *rabi* going on. Fodder and water sufficient. Common rice sells as follows:—

Sadar	...	...	...	11
Kushtia	...	...	...	13 $\frac{1}{2}$
Meherpur	...	...	...	11 $\frac{7}{8}$
Chuadanga	...	...	Report not received.	
Ranaghat	...	...	...	10

} per rupee.

**Murshidabad.**—Rainfall at Sadar 0.59, Jangipur 0.35, Lalbagh 0.10, Kandi 0.67. Weather seasonable. Prospects of *rabi* crops favourable and recent rain has done some good to them. No cattle-disease. Fodder and water sufficient. Common rice sells as follows:—

	Srs.			
Sadar	...	...	...	13
Jangipur	...	...	...	14
Kandi	...	...	...	14 $\frac{1}{2}$
Lalbagh	...	...	...	12 $\frac{1}{2}$

} per rupee.

**Jessore.**—Rainfall at Sadar 1·14, Jhenida 1·12, Magura 0·76, Bangaon 0·96. Weather seasonable. Prospects of the crops good. Peas, rapeseed and linseed being harvested. Fodder and water sufficient. Common rice sells as follows:—

	Srs.					
Sadar	...	...	...	...	...	11
Jhenida	...	...	...	...	...	12
Magura	...	...	...	...	...	12
Narail	...	...	...	Report not received.		
Bangaon	...	...	...	...	...	12 $\frac{1}{2}$

**Khulna.**—Rainfall at Sadar 0·83, Bagerhat 0·73, Satkhira 1·22. Weather cloudy with rain. Harvesting of *aman* nearly completed. Transplantation of *boro* continues. Fodder and water sufficient. Common rice sells as follows:—

	Srs.					
Sadar	...	...	...	...	...	13 $\frac{1}{2}$
Bagerhat	...	...	...	...	...	13
Satkhira	...	...	...	...	...	11

**Rajshahi.**—Rainfall at Sadar 0·36, Nator 0·32, Naugaon 0·10. Prospects of crops fair. Harvesting of *rabi* crops continues. No cattle disease. Fodder and water plentiful. Common rice selling at 14 seers a rupee.

**Dinajpur.**—Average rainfall 41. Weather seasonable. No cattle-disease. Fodder and drinking water plentiful. Rice 15 seers a rupee in Dinajpur town and 13 seers at Thakurgaon.

**Jalpaiguri.**—Rainfall at Sadar 89, Alipur 1·21. Weather seasonable. Prospects of *rabi* crops satisfactory. Fields for *bhadoi* and jute are being prepared. Common rice sells at 12 seers per rupee. Fodder and water sufficient.

**Darjeeling.**—Rainfall at Darjeeling nil, Kurseong 18, Siliguri 2·20, Kalimpong nil. Weather seasonable. *Hills*—*tori*, *phapor*, wheat, barley, potatoes, progressing. *Terai*—reaping of mustard proceeding. Potatoes doing well. Common rice sells as follows:—

	Srs.					
Hills	...	...	...	...	...	10
Terai	...	...	...	...	...	14

*Bhutta* sells at Darjeeling 18 seers and at Kalimpong 20 seers per rupee.

**Rangpur.**—Rainfall at Nilphamari 0·32. Weather seasonable. *Rabi* crops are being harvested and lands are being prepared for *aus* and jute. Water and fodder sufficient. Price of common rice stationary.

**Bogra.**—Average rainfall 9·15. Harvesting of *rabi* pulses and cultivation for *aus* and jute going on. Fodder and water sufficient. Prices unchanged.

**Patna.**—Rainfall at Sadar 0·76, Sirajganj 0·30. Weather cloudy for the most part. Prospects good. Land being prepared for paddy and jute. Prices unchanged.

**Dacca.**—Rainfall at Sadar 45, Manikganj 65, Munshiganj 71, Narainganj 41. Weather seasonable. Prospects of crops fair. Fodder available. No cattle-disease. Common rice 11 seers per rupee.

**Mymensingh.**—Rainfall at Sadar 1·10, Kishoreganj 2, Netrakona 0·11, Tangail 40. Weather cloudy. Prospects of standing crops fair, but more rain wanted for *boro* crop. Common rice sells as follows:—

	Srs.					
Sadar	...	...	...	...	...	10
Jamalpur	...	...	...	...	...	10 $\frac{1}{2}$
Kishoreganj	...	...	...	...	...	11
Tangail	...	...	...	...	...	10 $\frac{1}{2}$
Netrakona	...	...	...	...	...	11 $\frac{1}{2}$

**Faridpur.**—Rainfall at Sadar 0·58, Goalundo 0·67, Madaripur 0·44. Weather seasonable. The state and prospects of crops are good. More rain is wanted. Rice sells at 12 seers per rupee.

**Backergunge.**—Rainfall at Sadar 1·06. Weather seasonable. Prospects of crops good. Fodder and water sufficient. No cattle-disease reported. Common rice sells at 11 $\frac{1}{2}$  seers (new *aman*) per rupee.

**Tippera.**—Rainfall at Sadar 53, Chandpur 1·29. Weather seasonable, but more would be beneficial to crops. Water and fodder sufficient. Common rice sells at 11 $\frac{1}{2}$  seers per rupee.

**Noakhali.**—Rainfall at Sadar 1·01, Feni 40. Prospects of standing crops good in Feni, fair in Sadar. Fodder and water sufficient. Cattle-disease in Lakhipur. Price of common rice stationary.

**Chittagong.**—Rainfall at Sadar 0·06, Cox's Bazar nil. Harvesting of winter rice completed. Outturn 12 annas. Water and fodder wanted. Common rice sells at 12½ seers

**Patna.**—The weather has been cloudy greater part of the week. Harvesting of *rabi* and lancing of poppy commenced in places. Sugarcane being pressed. Fodder and water for cattle sufficient. Common rice sells at 14 seers per rupee in Patna town.

**Gaya.**—Rainfall nil. *Rabi* and poppy doing well. Common rice selling at 11½ seers per rupee.

**Shahabad.**—Rainfall at Bhabua 0·92, Sasaram 0·67, Dehri 0·46. Weather cloudy and cold. Recent rain has done some damage to the standing *rabi* crops. Pressing of sugarcane is in progress. Fodder and water sufficient. Rice 13 seers a rupee at Sadar.

**Saran.**—Rainfall nil. Weather seasonable, but occasionally cloudy. *Rabi* crops good. Bright sunshine needed. Sugarcane being pressed. Fodder and water sufficient. Common rice 14 seers 2 chitaks and *makai* 22 seers 9 chitaks per rupee.

**Champaran.**—Rainfall nil. Standing crops doing well. Prospects of poppy so far favourable. Fields being prepared for *bhadoi* in some places. Fodder and water sufficient. Prices of common rice and maize at Sadar are 15 and 26 seers per rupee respectively.

**Muzaffarpur.**—Rainfall nil. Prospects good. Prices are—Common rice 14 seers, wheat 10 seers, barley 20 seers, maize 23, gram 14, *arhar* 13, *naru* 23 seers a rupee.

**Darbhanga.**—Rainfall nil. *Rabi* doing well. Fodder and water sufficient. No cattle-disease reported. Common rice sells as follows:—

	Srs.			
Sadar	...	...	...	15½
Samastipur	...	...	...	15
Madhubani	...	...	...	15½

} per rupee.

**Monghyr.**—Rainfall at Monghyr nil. Begusarai 31, Jamui 0·73. Weather seasonable and occasionally cloudy. The rain has caused damage to *rabi* crops. Prospects of poppy fairly good and lancing commencing in places. Common rice sells as follows:—

	Srs.			
Sadar	...	...	...	13½
Begusarai	...	...	...	13½
Jamui	...	...	...	14

} per rupee.

**Bhagalpur.**—Rainfall at Banka 0·70, Supaul 0·02, Sadar 0·06, Madhipura nil. Weather cloudy. Partial rain and cloudy sky done some injury to *rabi* in some parts of the district. No cattle-disease. Fodder and water sufficient. Prices stationary.

**Purnea.**—Rainfall at Sadar 0·80, Kishanganj 0·00, Araria 0·31. Weather seasonable. *Rabi* crops doing well. Harvesting of tobacco and sugarcane going on. Lands are being ploughed for jute and *bhadoi* crops. Condition of cattle good. Fodder and water sufficient. Common rice sells as follows:—

	Srs.			
Sadar	...	...	...	14
Kishanganj	...	...	...	14
Araria	...	...	...	16

} per rupee.

**Malda.**—Rainfall at Sadar 0·06. Weather seasonable. Gathering of *kalai* and mustard finished. Prospects of standing *rabi* crops good. No cattle-disease. Price of rice 14½ seers per rupee. Fodder and water sufficient.

**Sonthal Parganas.**—Average rainfall 39. Sky overcast with clouds almost throughout the week though with slight rain. No cattle-disease reported. *Rabi* crops doing well. Fodder and water-supply ample. Rice sells at 15 seers 3 chitaks and maize 21 seers 11 chitaks per rupee.

**Cuttack.**—Rainfall at Sadar 2·82, Jajpur 3·92, Kendrapara 2·39, Banki 1·99, False Point 3·22. Weather seasonable. *Guru sarad*, sugarcane and *rabi* being harvested. *Dalua* and tobacco growing. Condition of cattle generally good, but small-pox reported from places. Fodder and water sufficient. Common rice sells as follows:—

	Srs. ch.			
Sadar	...	...	...	13 12
Jajpur	...	...	...	17 1
Kendrapara	...	...	...	15 12
Banki	...	...	...	15 12

} per rupee.

**Balasore.**—Rainfall at Sadar 1·43. Harvesting of *kandha*, *sarad*, and *rabi* continues. Cotton flowering. *Dalua* in ears. Sugarcane being pressed. Rice sells at 16 $\frac{1}{2}$ , 14 and 18 seers per rupee in interior, Balasore and Bhadrak, respectively. Ploughing commenced. Fodder and water sufficient.

**Angul.**—Rainfall at Sadar 2·97. Bissipara nil, Tikerpara ·04. Weather cloudy. Lands being ploughed. Common rice sells at 20 and 13 $\frac{1}{2}$  seers per rupee in Angul and Khondmals. Fodder and water plenty.

**Puri.**—Rainfall at Sadar 2·25, Khurda 2·75. Weather cloudy. Lands being ploughed for *sarad* paddy of the coming year. Harvesting of *kulthi* and pressing of sugarcane continue. Recent rainfall has done good on the whole to the *dalua*, *mung*, and other miscellaneous crops. Fodder and water-supply sufficient. Price of rice stationary.

**Hazaribagh.**—Weather cloudy. Rainfall at Sadar ·88, Giridih ·65. Fodder and water sufficient. Cattle-disease reported in Ganwan thana. Common rice sells at Sadar at 13 seers and at Giridih 12 $\frac{1}{2}$  seers per rupee.

**Ranchi.**—Rainfall 2·27. Weather cloudy. *Rabi* crops injured by unseasonable rain. Rice sells at Sadar at 15 seers and in the interior 18 $\frac{1}{2}$  seers per rupee. No cattle-disease reported. Fodder and water sufficient.

**Palamau.**—No rain. Weather cloudy. *Rabi* much injured. Fodder and water sufficient. Rice selling at Sadar at 12 $\frac{1}{2}$  seers per rupee.

**Manbhum.**—Rainfall at Sadar 2·26, Gobindpur 1·18. Weather seasonable. Prospects of crops on ground good. Fodder and water sufficient. Cattle-disease reported from Para and Katras. Average price of common rice at Sadar 13 seers 9 chitaks and Gobindpur 12 seers per rupee. Supply sufficient.

**Singhbhum.**—Rainfall 3·15. Average price of rice is 15 seers 2 chitaks in the district; at Chaibassa 14 seers.

**General Summary.**—There was a general rainfall during the week except in the Patna Division. Heavy rain fell in South-West Bengal and Orissa. *Rabi* being harvested. Threshing of *aman* and pressing of sugarcane going on. Poppy doing well. Prospects generally good. Cattle-disease reported from three districts. Fodder and water sufficient except in Chittagong. The price of common rice has risen in 17 districts, fallen in 8, and is stationary in the rest (21).

By order of the Lieutenant-Governor of Bengal,

F. A. SLACKE,

*Secretary to the Govt. of Bengal.*

REVENUE DEPARTMENT,

*The 19th February 1901.*

## PRICES-CURRENT (retail) of Food-grains and Salt in the Head-

Number.	DISTRICTS.*	QUANTITIES PER RUPEE IN															
		WHEAT.				BARLEY.				RICE, COMMON.				JOWAR OR CHOLUM ( <i>Sorghum Vulgare</i> ).			
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
Burdwan Division.	BENGAL.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.		
	1 Burdwan	12 8	12 8	13 5	...	...	...	12 0	12 12	14 4	...	...	...	...	...		
	2 Birbhum	12 0	12 0	12 0	...	...	...	12 0	12 0	13 8	...	...	...	...	...		
	3 Bankura	8 0	11 0	10 0	...	...	...	12 0	11 14	15 0	...	...	...	...	...		
	4 Midnapore	8 0	9 8	9 8	...	...	...	12 8	12 8	13 0	...	...	...	...	...		
	5 Hooghly	10 0	10 0	11 0	...	...	...	9 8	9 8	12 0	...	...	...	...	...		
Presesnor Division.	6 Howrah	...	...	...	...	...	...	9 8	9 8	12 0	...	...	...	...	...		
	7 24-Parganas	...	...	...	...	...	...	10 0	10 8	12 12	...	...	...	...	...		
	8 Calcutta	8 0	9 6	10 0	16 0	16 0	16 0	10 0	10 0	11 6	16 0	16 0	11 6	...	...		
	9 Nadia	11 0	13 5	15 4	...	...	...	11 7	11 7	12 13	...	...	...	...	...		
	10 Murshidabad	12 0	12 0	Gangajuli 10 0 Jamali 14 0	21 0	21 0	...	12 8	12 12	15 8	...	...	...	...	...		
	11 Jessore	8 0	11 0	9 0	12 0	12 0	12 0	13 4	13 4	16 0	...	...	...	...	...		
Rajshahi Division.	12 Khulna	...	...	...	...	...	...	13 0	13 0	16 0	...	...	...	...	...		
	13 Rajshahi	15 0	15 0	14 4	26 4	26 4	26 4	12 12	12 12	15 12	...	...	...	...	...		
	14 Dinajpur	10-10-3	10-10-3	9 9½	...	24 0	12 8	13 0	13 0	16 12	...	...	...	...	...		
	15 Jalpaiguri	9 0	9 0	11 0	...	...	...	12 8	12 8	16 0	...	...	...	...	...		
	16 Darjeeling	7 0	7 0	8 0	8 0	8 0	7 0	10 0	11 0	11 0	...	...	...	...	...		
	17 Rangpur	11 0	11 0	11 0	...	...	...	8 0	8 8	14 0	...	...	...	...	...		
Dacca Division.	18 Bogra	9 15	9 15	7 8	...	...	...	12 12	12 12	18 0	...	...	...	...	...		
	19 Pabna	13 14	14 4	16 2	25 8	25 8	35 0	11 4	12 0	16 8	...	...	...	...	...		
	20 Dacca	10 0	10 0	10 8	16 0	16 0	32 0	11 0	11 0	16 0	...	...	...	...	...		
	21 Mymensingh	9 0	9 0	10 0	12 0	13 0	...	10 0	11 4	16 0	...	...	...	...	...		
	22 Faridpur	10 0	10 0	14 0	19 0	10 0	35 0	11 0	11 0	13 8	...	...	...	...	...		
	23 Backergungo	...	...	...	...	...	...	11 4	11 4	16 0	...	...	...	...	...		

A. In the subdivisions the retail prices of salt per rupee are:—Kalna 10 seers 10 chitaks (panga) and 12 seers (karkatch); Katwa 11 seers 12 chitaks (karkatch); Raniganj 10 seers 8 chitaks (panga).  
 B. Rampur flat return not received.  
 C. At Vishnupur the retail price of salt is 9½ seers per rupee.  
 D. In the subdivisions the retail prices of salt per rupee are:—Contai 10 seers; Tamlik 11 seers; Ghatal 11 seers 8 chitaks.  
 E. In the subdivisions the retail prices of salt per rupee are:—Serampore return not received; Arambagh return not received.  
 F. At Ulubaria the retail price of salt is 10 seers 10½ chitaks per rupee.  
 G. In the marts in the interior of the district the retail prices of salt per rupee are:—Chetla 10 seers 11 chitaks; Barasat 11 seers; Baduria 10 seers 12 chitaks; Moraghat 9 seers 2 chitaks.  
 H. In the subdivisions the retail prices of salt per rupee are:—Kushtia 10 seers (panga); Chuadanga 11 seers (panga); Meherpur 10 seers (karkatch); Ranaghat 8 seers 10 chitaks (crushed).  
 I. In the subdivisions the retail prices of salt per rupee are:—Lalbagh return not received; Kandi 11 seers; Jangipur 11 seers.  
 J. In the subdivisions the retail prices of salt per rupee are:—Jhenida 10 seers; Magura 9½ seers; Narail 10 seers; Bangaon 10 seers 10 chitaks.

SEERS OF 80 TOLAHs.

KANGNI OR KAKUR, ITALIAN MILLET. ( <i>Setaria Italica.</i> )				GRAM, CHANA, CHIOLA, KADALAT, OR SUNAGA. ( <i>Cicer arietinum.</i> )			
Present return.	Next preceding re- turn.	Corresponding re- turn of last year.	Present return.	Next preceding re- turn.	Corresponding re- turn of last year.	Present return.	Next preceding re- turn.
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
10 0	10 0	10 0	12 12	12 12	16 13	10 0	10 0
10 0	10 0	10 0	13 0	13 0	13 8	10 0	10 0
10 0	10 0	10 0	10 0	12 0	12 8	10 0	10 0
10 0	10 0	10 0	13 0	12 0	12 8	13 8	13 8
10 0	10 0	10 0	12 0	12 0	14 8	10 0	10 0
10 0	10 0	10 0	11 8	11 8	16 0	10 0	10 0
10 0	10 0	10 0	13 8	12 10	16 0	10 0	10 0
10 0	10 0	10 0	11 6	11 6	13 0	10 0	10 0
10 0	10 0	10 0	16 0	16 0	20 0	10 0	10 0
10 0	10 0	10 0	16 0	16 0	19 0	10 0	10 0
10 0	10 0	10 0	12 10	12 8	16 0	10 0	10 0
10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0
10 0	10 0	10 0	15 0	15 0	18 0	10 0	10 0
10 0	10 0	10 0	12 0	11 8	12 0	10 0	10 0
10 0	10 0	10 0	12 8	12 0	15 0	10 0	10 0
10 0	10 0	10 0	9 0	9 8	9 0	10 0	10 0
10 0	10 0	10 0	11 8	11 8	13 0	10 0	10 0
10 0	10 0	10 0	12 0	12 0	12 0	10 0	10 0
10 0	10 0	10 0	12 6	12 6	15 0	10 0	10 0
10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0
10 0	10 0	10 0	11 0	11 4	9 0	10 0	10 0
10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0
10 0	10 0	10 0	9 0	9 0	9 0	10 0	10 0
10 0	10 0	10 0	9 0	9 0	9 0	10 0	10 0

quarters Station Bazaars of the Districts of Bengal on the 15th February 1901.

												WHOLESALE PRICES PER MAUND OF 40 SEERS.						
INDIAN-CORN OR MAIZE. ( <i>Zea mays</i> .)				ARRH OR THUR, CADJAN PEA. ( <i>Cajanus Indicus</i> .)				SALT.				SALT.				DISTRICTS.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Number.			
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. A. P.	Rs. A. P.	Rs. A. P.	BENGAL.						
"	"	"	"	"	"	7 0	8 4	10 8	A	Crushed.		Burdwan.	1	BURDWAN DIVISION.				
"	"	"	"	"	"	8 0	8 0	9 0	B	Panga.		Birbhum.	2					
"	"	"	"	"	"	9 0	9 8	11 4	C	Panga.		Bankura.	3					
"	"	"	"	"	"	8 0	8 0	10 0	D	Panga.		Midnapore.	4					
"	"	"	"	"	"	7 8	7 8	8 0	E	Panga.		Hooghly.	5					
"	"	"	"	"	"	8 0	5 0	10 8	F	Panga.		Howrah.	6					
"	"	"	"	"	"	8 0	9 0	10 10	G	Panga.		24-Parganas.	7	PRESIDENCY DIVISION.				
16 12	16 0	12 4	8 0	8 0	10 0	11 0	11 0	11 0	H	Panga.		Calcutta.	8					
"	"	"	"	"	"	8 6	8 0	11 7	I	Panga.		Nadia.	9					
"	"	"	"	"	"	8 8	9 0	12 0	J	Panga.		Murshidabad.	10					
"	"	"	"	"	"	12 0	13 4	10 0	K	Panga.		Jessore.	11					
"	"	"	"	"	"	9 0	9 0	10 0	L	Panga.		Khulna.	12					
"	"	"	"	"	"	15 0	15 0	20 10	M	Panga.		Rajshahi.	13	RAJSHAHI DIVISION.				
"	"	"	"	"	"	9 9½	9 9½	9 9½	N	Panga.		Dinajpur.	14					
"	"	"	"	"	"	9 8	9 0	11 0	O	Panga.		Jalpaiguri.	15					
20 0	20 0	16 0	6 0	6 0	6 8	10 0	10 0	10 0	P	Panga.		Darjeeling.	16					
12 8	12 8	17 0	7 0	7 0	8 0	8 0	8 0	8 0	Q	Panga.		Rangpur.	17					
"	"	"	"	"	"	12 0	12 0	12 0	R	Panga.		Bogra.	18					
"	"	"	"	"	"	8 0	8 0	9 12	S	Panga.		Pabna.	19	DACA DIVISION.				
"	"	"	"	"	"	8 0	8 0	10 0	T	Panga.		Dacca.	20					
"	"	"	"	"	"	7 0	8 0	8 0	U	Panga.		Mymensingh.	21					
"	"	"	"	"	"	10 0	10 0	7 8	V	Panga.		Faridpur.	22					
"	"	"	"	"	"	"	"	"	W	Panga.		Backergunge.	23					

K. In the subdivisions the retail prices of salt per rupee are:—Bagerhat 9 seers; Satkhira 11 seers.  
L. In the subdivisions the retail prices of salt per rupee are:—Nator 10½ seers; Nangona 9 seers 10 chittaks.  
M. No report from subdivision.  
N. In the Alipur Duars the retail price of salt per rupee is 8 seers.  
O. The retail prices of salt (panga) at Kurseong and Siliguri are 8 and 10 seers per rupee respectively.  
P. In the subdivisions the retail prices of salt per rupee are:—Gaibanda 10 seers; Kurigram return not received; Nilphamari 10 seers.  
Q. At Sirajganj the retail price of salt is 10½ seers per rupee.  
R. In the marts in the interior of the district the retail prices of salt per rupee are:—Madanganj 11 seers; Manikganj 9 seers; Mirkadam 11 seers 5 chittaks.  
S. In the subdivisions the retail prices of salt per rupee are:—Kishoreganj 8 seers 14 chittaks; Jamalpur 9 seers 6 chittaks; Tangail (Kagmari) 8 seers; Netrokona 9 seers.  
T. In the subdivisions the retail prices of salt per rupee are:—Goalundo 10 seers; Madaripur 10½ seers (crushed).  
U. In the subdivisions the retail prices of salt per rupee are:—Pirajpur 8 seers; Patuakhali 9 seers; Bhola 9 seers.

**PRICES-CURRENT (retail) of Food-grains and Salt in the Head-quarters**

Number	DISTRICTS.	QUANTITIES PER RUPEE IN													
		WHEAT.				BARLEY.				RICE, COMMON.			JOWAR OR CHOLUM ( <i>Sorghum Vulgare</i> ).		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.		
BENGAL—concluded.		S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.		
CHITTAGONG DIVISION.	24 Tippera	...	...	...	...	...	...	...	10 0	11 4	16 0	...	...	...	
	25 Noakhali	...	...	...	...	...	...	...	12 0	12 0	17 0	...	...	...	
	26 Chittagong*	...	...	...	...	...	...	...	12 12	15 4	...	...	...	...	
BIHAR.															
PATNA DIVISION.	27 Patna	11 0	14 0	15 0	24 0	27 0	19 0	15 0	15 8	15 0	30 0	30 0	16 0		
	28 Gaya	9 8	11 0	13 8	22 0	21 0	17 0	11 8	11 8	13 8	16 0	16 8	13 12		
	29 Shahabad*	...	11 0	10 8 & 12 0	...	13 0	18 0	...	13 0	10 0 & 13 8	...	...	...		
	30 Saran	9 8	13 0	11 10	19 0	20 0	15 0	13 0	14 0	12 0	...	...	...		
	31 Champaran	12 0	12 12	13 0	19 0	18 0	22 0	15 0	15 0	13 0	...	...	...		
	32 Muzaffarpur	10 0	12 0	12 2	20 0	20 0	17 0	14 0	14 0	13 2	...	...	...		
	33 Darbhanga	13 3	13 3	13 3	24 4	25 4	19 12	15 6	15 6	14 4	...	...	...		
BHAGALPUR DIVISION.	34 Monghyr	10 8	11 8	13 0	21 0	18 14	...	14 11	14 11	12 12	...	...	...		
	35 Bhagalpur	10 0	10 0	13 4	20 0	22 12	17 12	15 2	15 4	14 8	...	...	...		
	36 Furnos	14 0	10 15	12 8	...	...	...	14 0	14 0	16 0	...	...	...		
	37 Malda	...	...	...	...	...	...	13 8	13 0	16 0	...	...	...		
	38 Sonthal Pargana	9 8	10 0	9 0	14 0	14 0	17 0	14 0	14 8	13 8	...	...	...		
ORISSA.															
ORISSA DIVISION.	39 Cuttack	9 13	11 12	10 8	...	...	...	13 12	14 7	15 1	...	...	...		
	40 Balasore	8 0	10 0	13 0	11 0	11 0	11 0	14 4	14 4	15 0	...	...	...		
	41 Puri	10 8	10 8	9 3	...	...	...	14 7	15 4	15 12	...	...	...		
CHOTA NAGPUR.															
CHOTA NAGPUR DIVISION.	42 Hazaribagh	9 0	9 0	11 0	18 0	16 0	14 0	8 0	13 0	11 12	...	...	...		
	43 Ranchi	7 8 to 19 0	8 0 to 10 8	7 12 to 11 0	14 0	12 0	11 0	15 8	15 4	10 8	...	...	...		
	44 Palamau	8 7	9 0	12 6	16 14	16 14	15 12	11 13	13 8	11 13	...	...	...		
	45 Manbhum	10 0	10 0	11 0	16 0	16 0	20 0	12 8	13 0	14 0	20 0	...	...		
	46 Singhbhum	10 0	10 0	12 0	...	...	...	15 0	16 0	14 0	...	...	...		

\* Present return not realized

V. In the subdivisions the retail prices of salt per rupee are :—Chandpur 9 seers: Brahmanbaria 10 seers

At Feni Hât the retail price of salt is 9 seers per rupee.

**Y.** In the subdivisions the retail prices of sait per rupee are:—Barh 10 $\frac{1}{2}$  seers; Dimapore 10 $\frac{1}{2}$  seers; Bihar 9 $\frac{1}{2}$  seers.

2. In the subdivisions the retail prices of salt per rupee are:—Jahanabad 16 seers; Nawada 16 seers; Aurangabad return not received.

b. In the subdivisions the retail prices of salt per rupee are:—Siwan 11 seers 13 chitaks; Gopalganj (Mirganj) 12 seers 3 chitaks.

a. At Battish the retail price of salt is 10 seers per rupee.

c. At Bettiah the retail price of salt is 10 seers per rupee.  
 d. In the subdivisions the retail prices of salt per rupee are :—Hajipur 10 seers 5 chitaks : Sitamarhi 11 seers

In the sub-division the retail prices of salt per rupee are :—Rajpur 10 seers 5 chittak; Sitamarhi 11 seers. Madhubani return not received.

**CALCUTTA,**

The 19th February 1901.

SEERS OF 80 TOLANS.

KANGNI OR KAKUN, ITALIAN MILLET. ( <i>Setaria Italicu</i> .)				GRAM, CHANA, CHHOLA, KADALAY, OR SUNAGA. ( <i>Cicer arietinum</i> .)			
Present return.		Next preceding re- turn.		Corresponding re- turn of last year.		Present return.	
S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
...	...	...	...	...	...	10 0	10 0
...	...	...	...	...	...	10 10	10 0
19 0	22 0	16 0	19 0	19 0	19 0	18 0	
14 0	14 0	13 0	15 8	15 0	15 0	16 0	
...	...	...	...	14 0	14 0	16 0	
...	...	...	...	...	...	17 0	
12 0	16 0	13 0	15 0	15 0	16 0	15 4	
...	...	...	...	17 0	17 0	14 8	
...	...	...	...	14 0	14 0	15 12	
...	...	...	...	15 6	15 6	15 8	
...	...	...	...	16 12	16 12	17 0	
...	...	...	...	15 4	15 0	15 2	
...	...	...	...	12 0	14 0	18 0	
...	...	...	...	...	...	14 0	
...	...	...	...	13 0	12 4	13 8	
Birl or kala.							
...	...	...	...	12 7	13 2	17 11	
...	...	...	...	11 0	11 0	13 0	
...	...	...	...	11 0	11 0	16 0	
...	...	...	...	11 14	11 0	15 12	
...	...	...	...	13 0	12 4	14 0	
...	...	...	...	11 0	12 0	13 0	
...	...	...	...	12 0	12 0	14 1	
...	...	...	...	12 0	12 0	13 0	
...	...	...	...	10 0	10 0	12 0	

*Station Bazaars of the Districts of Bengal on the 15th February 1901—(concluded)*

WHOLESALE PRICES PER MAUND OF 40 SEERS.												DISTRICTS.	Number.		
INDIAN-CORN OR MAIZE ( <i>Zea mays</i> .)				ARHAR OR THUR, CADJAN PEA. ( <i>Cajanus indicus</i> .)				SALT.							
Present return.	Next return.	Corresponding return of last year.	Present return.	Next return.	Corresponding return of last year.	Present return.	Next return.	Corresponding return of last year.	Present return.	Next return.	Corresponding return of last year.				
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. A. P.	Rs. A. P.	Rs. A. P.	BENGAL—concluded.			
...	...	...	...	...	...	...	V.	10 0	10 0	10 0	3 12 0	3 12 0	Tippera.	24	
...	...	...	...	...	...	...	W.	9 0	9 0	10 0	4 8 0	4 8 0	Noakhali.	25	
...	...	...	...	7 8	8 0	...	10 10	10 4	10 4	...	3 12 0	3 10 0	Chittagong.	26	
24 0	24 0	15 0	10 0	12 0	14 0	10 4	Y.	10 0	11 0	11 0	3 10 0	3 11 0	Patna.	27	
19 0	19 8	...	9 0	10 0	11 0	10 5	Z.	10 10	11 0	11 0	3 14 0	3 12 0	Gaya.	28	
}	20 0	...	...	14 0	12 0	...	10 0	10 8	10 8	...	4 0 0	3 9 0	Shahabad.	29	
	22 8	23 0	13 12	8 0	9 0	13 0	b.	10 0	10 10	10 8	14 0	0 0 3	Saran.	30	
26 0	26 0	15 8	9 4	9 8	11 8	10 0	c.	10 0	10 0	10 8	4 0	0 0 4	Champaran.	31	
23 0	23 0	14 4	9 8	9 8	11 8	10 0	d.	10 6	11 8	13 9	0 0 3	9 0	Muzaffarpur.	32	
23 1	24 4	15 6	9 0	9 0	12 2	11 0	e.	11 4	11 0	13 10	0 0 3	6 0	Darbhanga.	33	
19 15	19 15	...	13 2	14 11	...	10 8	f.	10 8	11 0	13 8	6 3 8 6	3 8 6	Monghyr.	34	
17 12	19 0	17 10	8 14	8 14	11 6	10 8	g.	10 8	10 8	10 0	3 12 0	3 13 0	Bhagalpur.	35	
...	...	...	8 0	8 0	10 0	10 8	h.	10 8	10 8	10 8	13 12 0	3 12 0	Purnea.	36	
...	...	...	8 0	7 8	8 0	i.	10 0	10 0	9 8	13 14 0	0 3 14 0	Malda.	37		
19 0	20 0	17 0	14 0	15 0	16 0	10 0	j.	10 8	10 0	10 0	3 14 0	0 3 14 0	Sonthal Parganas.	38	
...	...	...	12 7	12 7	19 11	13 0	k.	13 0	10 12	3 0	0 3 0 0	3 0 0	ORISSA.		
...	...	...	7 0	8 0	8 8	10 8	l.	10 8	11 0	13 12 0	0 3 12 0	3 12 0	Cuttack.	39	
...	...	...	7 3	7 14	9 3	13 8	m.	13 8	13 4	13 0	2 14 0	2 15 0	Balasore.	40	
...	...	...	7 3	7 14	9 3	13 8	...	13 4	13 0	2 14 0	2 15 0	2 15 0	Puri.	41	
18 0	18 0	13 4	7 8	9 0	9 0	9 0	9 0	9 0	9 0	4 7 0	4 7 0	4 5 0	CHOTA NAGPUR.		
21 0	22 0	...	8 0	7 0	8 0	9 8	9 8	9 8	9 8	4 2 0	4 2 0	4 2 0	Hazaribagh.	42	
15 12	19 2	12 15	13 1	13 8	13 8	9 9	9 9	9 9	9 4	...	...	...	Ranchi.	43	
22 0	18 0	16 0	9 0	11 0	11 0	10 0	n.	10 0	10 0	10 0	3 14 0	0 3 12 0	Manbhum.	45	
14 0	16 0	18 0	8 0	8 0	10 0	9 0	9 0	9 0	10 0	0 3 8 0	0 3 8 0	4 0 0	Singhbhum.	46	

- f. In the subdivisions the retail prices of salt per rupee are :— Begusarai 10½ seers ; Jamui 10½ seers.
- g. In the subdivisions the retail prices of salt per rupee are :— Banka 10 seers ; Madhipura 9 seers ; Supaul 10 seers.
- h. In the subdivisions the retail prices of salt per rupee are :— Kishanganj and Arraria 9 seers.
- i. At Balia Nawabganj the retail price of salt (panga and karkatch) is 10 seers per rupee.
- j. In the subdivisions the retail prices of salt per rupees are :— Deoghur 10½ seers ; Godda 10 seers (crushed) ; Jamtara 11 seers (crushed) ; Pakaur 11 seers (karkatch) ; Rajmahal 11 seers.
- k. In the subdivisions the retail prices of salt per rupee are :— Jajpur 10 seers (panga) ; Kendrapara 10 seers (panga).
- l. At Bhadrak the retail price of salt is 10½ seers per rupee.
- m. At Kharda the retail price of salt is 12 seers per rupee.
- n. At Gobindpur the retail price of salt is 10 seers 10 chitaks per rupee.

Published for general information.

F. A. SLACKE,  
*Secretary to the Govt. of Bengal.*

## PRICES-CURRENT (wholesale) of Food-grains, Firewood, &amp;c.,

Number.	Marts.	RICE (BEST SORT).			COMMON RICE ( <i>mota chaul</i> ).			WHEAT ( <i>Triticum sativum</i> ).			BARLEY ( <i>Hordeum vulgare</i> ).			
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1	Calcutta	... 4 12 0	4 12 0	4 12 0	3 12 0	3 12 0	3 4 0	4 12 0	4 0 0	3 12 0	2 4 0	2 4 0	2 4 0	
2	Burdwan	... 4 0 0	3 12 0	3 0 6	3 5 0	3 3 0	2 12 0	...	...	3 0 0	...	...	...	
3	Midnapore	... $\left\{ \begin{matrix} 4 & 8 & 0 \\ 4 & 0 & 0 \end{matrix} \right. \begin{matrix} 4 & 8 & 0 \\ 4 & 0 & 0 \end{matrix} \right\}$	3 8 0	3 0 0	3 0 0	2 14 0	...	...	...	...	...	...	...	
4	Pabna	... 6 8 0	6 8 0	6 0 0	3 6 6	3 5 3	2 6 6	2 14 0	2 13 6	2 7 6	...	...	...	
5	Rangpur	... 5 0 0	5 12 0	5 0 0	4 2 0	4 0 0	2 10 0	3 8 0	3 8 0	3 8 0	...	...	...	
6	Dacca	... 4 8 0	4 0 0	3 10 0	3 10 0	3 9 0	2 8 0	3 14 0	3 14 0	3 8 0	2 8 0	2 8 0	1 4 0	
7	Chittagong*	... ...	...	3 12 0	...	3 4 0	2 10 0	...	...	...	...	...	...	
8	Patna	... 3 4 0	3 4 0	3 4 0	2 10 0	2 8 0	2 10 0	3 9 0	2 12 0	2 10 0	1 10 0	1 7 0	2 1 0	
9	Muzaffarpur	... 4 7 0	4 7 0	5 5 0	2 12 0	2 12 0	2 15 6	3 13 0	3 3 0	3 1 3	1 14 6	1 14 6	2 3 6	
10	Bhagalpur	... 4 0 0	3 15 0	3 3 0	2 10 0	2 10 0	2 12 0	4 0 0	3 15 0	3 0 0	2 0 0	1 12 0	2 4 3	
11	Cuttack	... 3 12 0	3 12 0	3 6 0	2 12 0	2 12 0	2 7 0	3 12 0	3 6 0	3 12 6	...	...	...	
12	Ranchi	... $\left\{ \begin{matrix} 3 & 1 & 0 \\ 3 & 10 & 0 \end{matrix} \right. \begin{matrix} 5 & 0 & 0 \\ 5 & 10 & 0 \end{matrix} \right\}$	3 3 0	5 0 0	2 9 3	2 10 0	3 13 4	$\left\{ \begin{matrix} 4 & 0 & 0 \\ 5 & 6 & 6 \end{matrix} \right. \begin{matrix} 3 & 13 & 0 \\ 5 & 0 & 0 \end{matrix} \right\}$	$\left\{ \begin{matrix} 3 & 10 & 0 \\ 5 & 2 & 6 \end{matrix} \right. \begin{matrix} 3 & 10 & 0 \\ 5 & 2 & 6 \end{matrix} \right\}$	2 3 6	3 5 8	3 10 0		

\* The present return not received.

CALCUTTA,  
The 19th February 1901.

Present return.		Next preceding return.		Corresponding return of last year.		Present return.		Next preceding return.		Corresponding return of last year.		Present return.		Next preceding return.		Corresponding return of last year.		Present return.		Next preceding return.		Corresponding return of last year.	
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
2 4 0	2 4 0	3 4 0	2 0 0	2 2 0	4 4 0	...	...	...	3 4 0	3 4 0	2 12 0	...	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3 2 9	3 2 3	3 2 3	3 2 3	3 2 3	3 2 3	3 2 3	3 2 3	3 2 3	
...	...	...	...	...	...	...	...	...	...	...	...	...	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	
...	...	...	...	...	...	...	...	...	...	...	...	...	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	
...	...	...	...	...	...	...	...	...	...	...	...	...	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	3 4 0	
1 4 0	1 5 0	2 7 0	...	...	...	...	...	...	...	...	...	...	2 1 0	2 1 0	2 1 0	2 1 0	2 1 0	2 1 0	2 1 0	2 1 0	2 1 0	2 1 0	
...	...	...	...	...	...	...	...	1 10 6	1 10 6	...	...	...	2 12 0	2 10 6	2 10 6	2 10 6	2 10 6	2 10 6	2 10 6	2 10 6	2 10 6	2 10 6	2 10 6
...	...	...	...	...	...	...	...	...	...	...	...	...	2 12 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0	2 10 0
...	...	...	...	...	...	...	...	...	...	...	...	...	3 1 0	2 15 0	2 15 0	2 15 0	2 15 0	2 15 0	2 15 0	2 15 0	2 15 0	2 15 0	2 15 0
...	...	...	...	...	...	...	...	...	...	...	...	...	3 5 3	3 5 3	3 5 3	3 5 3	3 5 3	3 5 3	3 5 3	3 5 3	3 5 3	3 5 3	3 5 3
...	...	...	...	...	...	...	...	...	...	...	...	...	3 10 0	3 10 0	3 10 0	3 10 0	3 10 0	3 10 0	3 10 0	3 10 0	3 10 0	3 10 0	3 10 0

## PRICE PER MAUND G

INDIAN-CORN OR MAIZE ( <i>Zea mays</i> ).				ARHAR DAL OR THUR— CADJAN PEA ( <i>Cajanus indicus</i> ).				LINSEED.				MUSTARD AND RAPESEED.				
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Present return.	Next preceding return.	Corresponding return of last year.		
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
2 2 0	2 4 0	3 0 0	4 12 0	4 12 0	3 12 0	6 4 0	6 12 0	5 4 0	5 0 0	5 12 0	4 4 0					
...	...	...	4 12 0	4 6 0	3 13 0	...	...	...	4 11 0	6 1 0	5 0 0					
...	...	...	...	...	...	6 8 0	6 8 0	4 14 0	5 8 0 to 6 8 0	5 8 0 to 6 8 0	4 12 0					
...	...	...	5 0 0	5 0 0	4 1 0	6 0 0	6 0 0	4 4 0	5 0 0	4 10 0	4 6 0					
2 12 0	2 12 0	2 4 0	5 0 0	5 0 0	4 8 0	...	...	...	6 0 0	6 8 0	4 8 0					
...	...	...	4 8 0	4 8 0	3 12 0	...	...	...	...	...	...					
...	...	...	...	5 4 0	4 12 0	...	...	...	...	...	...	5 12 0	4 12 0			
1 10 0	1 10 0	2 10 0	3 14 0	3 4 0	2 12 0	4 14 0	3 15 0	4 6 0	3 14 0	4 6 0	3 14 0					
1 10 6	1 10 6	2 12 0	4 0 0	4 0 0	3 5 3	...	...	...	...	...	...					
2 4 0	2 1 0	2 4 0	4 8 0	4 7 0	3 8 0	...	...	4 4 0	4 8 0	4 8 0	4 10 0					
...	...	...	3 0 0	3 3 0	2 0 6	...	...	...	4 4 0	4 6 0	3 11 3					
...	...	...	5 0 0	5 11 6	5 0 0	5 0 0	5 0 0	5 0 0	4 7 0 to 6 15 0	5 0 0 to 6 10 6	5 13 0					

## 10 STANDARD SEERS.

TIL OR JINJILI SEED.			SUGAR (RAW).				COTTON, CLEARED.				JUTE.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.		
39	40	41	42	43	44	45	46	47	48	49	50		
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
5 8 0	5 8 0	4 8 0	4 4 0	4 4 0	5 10 0	18 0 0	18 0 0	16 0 0	4 12 0	4 12 0	5 0 0		
... ...	... ...	... ...	4 5 0	4 2 0	5 0 0	...	...	19 0 0	...	...	...		
{ 4 8 0 to 5 0 0 }	{ 4 12 0 to 5 0 0 }	{ 4 10 0 }	21 0 0	21 0 0	{ 18 0 0 20 0 0 }	...	...	...	...	...	{ 1 }		
4 14 0	4 10 0	3 14 0	3 12 0	3 8 0	3 0 0	21 0 0	21 0 0	20 0 0	4 8 0	4 4 0	5 11 0		
4 8 0	4 6 0	3 11 3	4 2 0	4 8 0	4 5 0	22 0 0	22 0 0	24 0 0	...	...	...		
...	...	...	{ 4 7 0 to 5 0 0 }	{ 4 7 0 to 5 0 0 }	{ 4 7 0 4 11 0 }	22 12 0	22 12 0	22 12 0	...	...	...		

GHI (CLARIFIED BUTTER).			TOBACCO LEAF.			HIDES (COW).			GRASS.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
51	52	53	54	55	56	57	58	59	60	61	62
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
40 0 0	40 0 0	33 0 0	9 0 0	9 0 0	6 0 0	250 0	Per 100 pieces.	250 0 0	1 2 0	1 2 0	0 14 0
41 0 0	41 0 0	33 0 0	...	...	...	1 0 0	1 0 0	0 12 0	...	...	...
38 0 0	38 0 0	33 0 0	7 8 0	7 8 0	6 0 0	to	to	to	...	...	...
to	to	to	7 8 0	7 8 0	6 0 0	2 4 0	2 4 0	2 4 0	...	...	...
42 0 0	42 0 0	34 0 0	11 0 0	11 0 0	9 12 0	1 4 0 to	1 4 0 to	1 0 0 to	...	...	...
53 0 0	53 0 0	52 0 0	11 4 0	11 0 0	9 4 0	2 8 0	2 8 0	2 8 0	...	...	...
45 0 0	45 0 0	34 0 0	7 8 0	7 8 0	8 8 0	...	...	...	0 2 6	0 2 6	0 2 6
42 0 0	42 0 0	40 0 0	10 0 0	10 0 0	14 0 0	30 0 0	30 0 0	25 0 0	0 4 6	0 5 0	0 4 0
...	45 0 0	45 0 0	...	12 10 0	12 8 0	...	18 0 0	18 8 0	...	...	...
36 0 0	33 0 0	29 0 0	3 0 0	3 0 0	3 0 0	...	...	...	0 5 0	0 5 0	0 5 0
37 10 3	35 9 0	29 1 6	8 0 0	8 0 0	11 7 0	...	...	...	...	...	...
41 0 0	41 10 0	32 0 0	5 0 0	5 0 0	4 0 0	...	...	...	...	...	...
43 8 0	38 4 0	30 0 0	4 8 0	4 8 0	4 4 0	25 0 0	25 0 0	25 0 0	0 9 0	0 9 0	0 8 11
40 0 0	40 0 0	29 8 0	8 0 0	8 0 0	8 0 0	per maund.	...	...	...	...	...
to	to	to	to	to	to	1 0 0	1 0 0	1 0 0	0 3 0	0 3 0	0 3 0
45 11 3	45 11 3	34 0 0	13 0 0	13 0 0	13 0 0	per piece.	...	...	...	...	...

the undermentioned Marts of Bengal on the 15th February 1901.

STRAW.		JUAR STALKS.		PRICES PER MAUND OF 40 STANDARD SEERS												MARTS
				IRON.			FIREWOOD.			SALT.						
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	
63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1 0 0	1 0 0	0 9 0	1 ...	1 ...	1 ...	1 ...	1 ...	1 ...	1 ...	1 ...	1 ...	1 ...	1 ...	1 ...	1 ...	1. Calcutta.
0 5 0	0 5 6	0 5 0	...	...	...	...	...	...	...	...	0 5 3	0 5 3	0 11 6	3 5 6	3 5 0	2. Burdwan.
0 8 6	0 3 6	0 2 11	...	...	...	...	...	...	...	...	5 0 0 to 5 4 0	5 0 0 to 5 4 0	3 8 0 to 4 12 0	0 4 0	0 4 0	3. Midnapore.
1 0 0	1 0 0	1 0 0	...	...	...	...	7 12 0	7 12 0	7 0 0	0 5 0	0 5 0	0 4 0	0 3 13	0 3 13	0 3 14	4. Pabna.
0 7 0	0 7 0	0 7 0	...	...	...	...	7 12 0	7 8 0	7 0 0	0 5 0	0 5 0	0 8 0	4 4 0	4 4 0	4 0 4	5. Raopur.
...	...	1 ...	1 ...	1 ...	1 ...	1 ...	6 8 0	6 8 0	5 8 0	0 5 6	0 5 8	0 5 0	3 12 0	3 10 0	3 12 0	6. Dacca.
...	...	1 ...	1 ...	1 ...	1 ...	1 ...	...	7 4 0	5 8 0	...	...	...	...	1 3 12 0	1 3 10 0	7. Chittagong.
0 5 0	0 5 0	0 5 0	...	...	...	...	1 0 0	4 0 0	4 0 0	0 5 0	0 5 0	0 5 0	3 10 0	3 11 0	3 7 0	8. Patna.
...	...	...	...	...	...	...	5 10 6	5 11 6	5 11 6	0 4 0	0 4 0	0 4 0	3 13 0	3 13 0	3 7 0	9. Muzaffarpur.
...	...	...	...	...	...	...	6 8 0	6 6 0	7 0 0	0 5 9	0 5 9	0 6 0	3 12 0	3 13 0	3 12 0	10. Bhagalpur.
0 8 0	0 8 0	0 6 0	...	...	...	...	4 4 0	4 4 0	4 4 0	0 4 0	0 4 0	0 4 0	3 0 0	0 3 0	0 3 0	11. Cuttack.
No fixed rate.			...	...	...	...	8 0 0	8 0 0	8 0 0	0 4 0	0 4 0	0 4 0	4 2 0	4 2 0	4 2 0	12. Ranchi.

F. A. SLACKE,  
Secretary to the Govt. of Bengal.

## I.

## IMPORTS INTO CALCUTTA.

The following Statement shows the Quantities of the Principal Staples of Traffic imported into Calcutta from the Interior by Rail, Road, River (Country-boat and Steamer), the Calcutta Canals and coasting vessels during the month of November 1900.

Whence imported.	FOOD-GRAINS.								FIBROUS PRODUCTS.		OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	Coal and coke.	Indigo.	SUGAR.			TOBACCO.		
	Rice and paddy.			Wheat,	Wheat flour,	Gram and pulse.	Other food- grains.	Total,	Jute, raw.	Gunny- bags.†	Linseed,	Mustard seed.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	
	Rice.	Paddy.	Total (in rice).						10	11													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
<b>BENGAL.</b>		Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	
Burdwan	...	96,573	38,022	1,20,643	705	...	6,490	1	1,27,539	644	19,420	1,971	...	66	3	35,41,991	13	...	...	...	433	34	
Birbhum	...	1,50,800	...	1,50,800	...	...	...	...	1,18,162	9,635	1,631	...	100	50	...	...	...	...	...	...	77	...	
Midnapore	...	11,19,972	5,994	1,18,718	...	1,444	...	...	1,18,162	15,317	4,711	...	215	147	8,985	...	...	...	...	1,010	...		
Hooghly	...	1,18,326	30,154	1,77,180	2,255	3	6,405	66	1,82,999	1,48,085	205,068	312	...	214	...	2,628	...	...	...	3,220	4,558	961	
24-Parganas	...	2,14,839	42,471	2,41,353	...	37	117	...	2,41,537	3,23,003	902,373	123	...	860	...	7,528	...	258	3,720	15,551	2,741	724	
Nadia	...	23,612	1,414	22,896	14,808	...	1,58,728	626	1,97,148	1,80,247	34,482	12,865	926	...	1	55	...	16	198	102	163	1,697	
Murshidabad	...	33,496	...	33,495	4,220	...	17,144	1,751	57,110	23,055	465	1,958	944	...	396	18	84	...	...	2,580	428	2,069	
Jessore	...	20,575	8,600	26,250	348	...	3,601	...	30,289	1,69,807	1,645	1,016	859	...	5	...	...	...	...	7,325	...		
Kuina	...	5,118	10,600	8,743	...	...	...	...	8,743	29,743	...	159	...	...	...	...	...	...	...	753	...		
Rajshahi	...	6,866	...	6,866	968	...	6,895	...	14,719	57,701	400	2,456	6	...	57	123	...	...	...	...	...		
Dinajpur	...	36,784	2,064	38,074	8	...	108	...	38,190	55,407	174,825	...	...	...	...	...	...	...	...	...	...		
Malda	...	4	...	4	...	...	...	...	4	17,268	117,530	...	...	45,456	...	...	...	...	...	...	1,804		
Malda	...	3	...	3	...	...	...	...	3	16,092	187,775	...	...	17,184	...	...	...	...	...	...	...		
Darjeeling	...	...	...	...	...	...	...	...	1,752	3,07,175	4,095	79	...	596	6	...	...	...	...	...	10,574		
Rangpur	...	890	...	890	862	...	...	...	...	20,482	67,344	4,165	...	...	...	...	...	...	...	...	...		
Bogra	...	25,815	1,008	29,482	...	...	...	...	...	4,025	50	4,675	3,12,247	5,670	1,943	...	...	...	...	...	...	...	
Pabna	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	...	
Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	178	...	
Dacca	...	68	...	68	...	...	343	...	411	14,13,893	1,260	20	...	20	...	...	...	...	...	...	111	...	
Mymensingh	...	3	206	133	...	...	863	...	1,025	3,57,445	1,470	...	277	...	...	...	...	...	...	...	316	...	
Faridpur	...	9,724	230	9,880	453	...	8,729	...	19,042	5,62,646	14,700	245	...	12	...	...	...	...	...	...	...		
Backergunga	...	2,08,766	1,400	2,09,841	...	...	...	...	...	2,09,641	9,006	153	58	...	674	262	...	...	...	...	...		
Tippera	...	8,010	...	8,010	...	...	...	...	...	8,010	1,25,445	1,260	...	...	...	...	...	...	...	...	...		
Noakhali	...	8,440	1,750	9,534	...	...	...	...	...	9,534	2,565	...	...	...	...	...	...	...	...	...	...		
Chittagong	...	...	...	...	...	...	...	...	...	...	8,685	...	...	...	...	1,588	1,233	...	...	...	...		
Total of Bengal	...	11,21,183	1,43,963	13,11,172	24,720	48	2,14,904	2,602	14,53,455	43,05,464	1,787,014	24,022	3,636	64,392	3,030	774	35,61,150	113	456	6,402	29,745	24,265	1,719
<b>BIHAR.</b>																							
Purnia	...	584	...	584	1,411	...	22,476	3,542	98,013	885	...	6,874	1,839	...	...	...	...	...	...	172	1,410	778	976
Gaya	...	...	...	...	340	...	9,132	...	2,473	...	490	2,801	...	6	...	...	...	...	...	4,780	...	...	
Shahabad	...	1,075	...	1,075	3,329	...	12,066	...	16,433	...	...	...	...	...	...	...	...	...	...	182	411	50	3
Saran	...	...	...	...	260	...	...	1,523	1,413	1,675	...	...	...	27	...	...	...	...	...	...	...	...	
Champaran	...	...	...	...	...	...	200	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Muzaffarpur	...	1,228	...	1,228	...	...	1,517	1,443	4,188	...	...	...	...	...	...	...	...	...	...	...	788	...	
Darbhanga	...	6,140	...	6,140	1,143	...	1,717	714	9,714	...	...	315	6,806	98	...	...	...	...	...	...	2,130	...	
Monghyr	...	16	...	16	22,844	...	12,531	3,414	38,805	320	175	1,751	885	...	24	...	...	...	...	...	45	6	
Bhagalpur	...	6,088	712	6,483	13,248	...	6,763	12,105	38,599	...	9,155	771	5,624	...	...	...	...	...	...	43	294	...	
Parnera	...	6,232	...	6,232	2,189	...	6,798	...	15,319	56,944	5,325	359	305	...	...	...	...	...	...	...	663	...	
Malda	...	1,103	...	1,103	941	...	1,379	312	3,735	6,677	...	241	...	...	...	...	...	...	...	...	...		
Sonthal Parganas	...	2,796	...	2,796	11,803	...	17,468	2,192	34,259	5,933	2,905	1,496	6,438	...	17	...	...	...	...	...	...		
Total of Bihar	...	25,212	712	25,657	57,521	...	85,047	26,358	1,94,583	68,809	11,375	29,963	18,918	...	74	69	...	...	...	397	6,601	4,702	985

\* One maund of paddy is equivalent to 25 seers of rice.

† Exclusive of bags obtained by local manufacture.

Whence imported.	FOOD-GRAINS.				FIBROUS PRODUCTS.				OILSEEDS.				SUGAR.				TOBACCO.					
	Rice and paddy.	Rice.	Paddy.*	Wheat flour.	Gram and pulse.	Other food-grains.	Total.	Jute, raw.	Gunny-bags.†	Mustard seed.	Linenseed.	Tea, Indian.	Cotton, raw.	Silk, raw.	Coal and cokes.	Indigo.	Betelroot.	Unrefined.	Refined.	Unmanufactured.	Taxed.	Manufactured.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Orissa.																						
Cuttack.	10,683	10,683	3,713	22,004	3,838	3,838	35,840	4,805	370	1,200	104	54	104	104	104	104	104	104	104	104	104	104
Balasore.	10,683	10,683	3,713	22,004	3,838	3,838	35,840	4,805	370	1,200	104	54	104	104	104	104	104	104	104	104	104	104
Total of Orissa.	10,683	10,683	3,713	22,004	3,838	3,838	35,840	4,805	370	1,200	104	54	104	104	104	104	104	104	104	104	104	104
CHOTA NAGPUR.																						
Hearibagh.	1,515	1,515	1,515	1,515	1,515	1,515	1,515	2,882	2,882	2,882	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870
Manbhum.	1,515	1,515	1,515	1,515	1,515	1,515	1,515	2,882	2,882	2,882	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870
Singbhum.	1,515	1,515	1,515	1,515	1,515	1,515	1,515	2,882	2,882	2,882	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870
Total of Chota Nagpur.	1,515	1,515	1,515	1,515	1,515	1,515	1,515	2,882	2,882	2,882	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870
Grand Total of supplies from the Provinces under the Lieutenant-Governor of Bengal.	11,07,893	1,49,403	12,60,458	59,250	48	3,06,660	28,060	16,78,575	49,91,192	1,80,890	54,685	22,554	64,825	2,239	843	64,61,998	113	456	6,729	35,346	29,117	2,704
OTHER PROVINCES.																						
Assam.	684	2	685	589	589	589	5,205	31,928	4,1105	1,35,114	140	132	24,707	1,90,668	41,107	102	102	102	102	102	102	102
North-Western Provinces and Oudh.	889	33	39	672	672	672	672	672	672	672	1,051	251	630	8,950	270	365	154	87	87	87	87	87
Punjab.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Central Provinces and Berar.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Bihar.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Bombay.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Madras.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Burma.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sind.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Grand Total of imports in November.	11,75,538	1,48,410	19,65,194	1,75,237	5,985	3,41,931	44,08,031	1,80,434	68,133	72,456	1,05,263	58,570	920	65,62,351	121	9,568	6,928	35,346	35,040	1,746	1,746	
in 1899	12,46,452	2,51,749	13,91,395	2,10,886	...	4,62,106	52,001	21,22,968	32,75,101	1,95,146	2,94,860	1,75,007	2,37,491	40,069	1,179	47,94,410	14,46,410	61,739	4,040	33,230	5,054	5,054

\* One māund of paddy is equivalent to 25 seers of rice.

† Exclusive of bags obtained by local manufacture.

## II.

The Sea-borne Trade of Calcutta in these staples during the month of November 1900 was as follows:—

EXPORTED FROM CALCUTTA.	Rice.	Paddy.	Total (in rice).	Wheat.	Wheat flour.	Gram and pulses.	Other food- grains.	Total.	Jute, raw.	Gunny- bags.	Linseed.	Mustard seed.	Tea, Indian.	Cotton, raw.	Silk, raw.	Coal and coke.	Indigo.	SUGAR.		TOBACCO.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
To Indian Ports, viz.—	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Bombay ...	25,676	.....	35,076	4,038	.....	91,160	.....	1,31,334	.....	2,213,230	.....	100	6,433	.....	.....	26,76,843	1	410	.....	.....	9	.....
Madras ...	1,07,820	1,776	1,08,930	208	256	47,096	99	1,56,719	.....	101,200	.....	.....	13	.....	20	4,05,720	.....	400	5	.....	.....	
Other ports in Madras ...	1,07,241	.....	1,07,241	1,829	671	17,630	710	1,28,128	.....	190,000	.....	210	22	.....	.....	.....	.....	99	.....	.....	503	.....
Burma ...	5,451	.....	5,451	1,919	17,115	16,814	3,208	44,567	.....	1,901,100	.....	.....	238	270	47	7,03,667	1	1,126	1,960	7,691	147	
Other Indian ports ...	12	.....	12	745	767	1,665	7	3,196	.....	180,600	1	.....	.....	.....	.....	3,568	.....	2,311	457	1,488	120	
Pondicherry ...	.....	.....	.....	4	128	630	.....	823	.....	57,620	.....	.....	.....	.....	.....	245	.....	.....	.....	.....	.....	
Sind ...	299	.....	299	.....	.....	1,078	.....	1,377	.....	102,070	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total of Inter- portional Trade	2,56,199	1,776	2,57,600	9,373	19,037	1,76,119	4,033	4,66,231	.....	4,794,700	1	740	6,761	276	67	37,90,041	2	4,506	2,303	9,179	874	
To Foreign Ports—																						
United Kingdom	41,947	.....	41,947	.....	.....	12,243	.....	54,183	12,40,704	3,916,630	47,849	33,491	2,78,887	1,151	333	.....	142	50	.....	.....	56	
Other foreign ports ...	7,42,308	44	7,42,305	2,237	1,103	65,911	18,033	8,23,793	15,46,522	11,036,150	457	27,302	27,974	11,707	871	11,07,206	69	16	.....	83	229	
Total of Foreign Trade ...	7,84,315	44	7,84,342	2,237	3,103	77,153	13,33	8,77,958	27,87,226	14,950,800	48,297	55,713	3,06,161	12,858	1,203	11,97,206	211	66	.....	29	315	
Grand Total of Exports in Nov. (1900 1899)	10,40,814	1,820	10,41,951	11,630	26,140	2,53,372	17,126	13,44,313	27,87,226	19,745,000	48,08	56,533	3,13,622	13,134	1,270	47,87,217	213	4,573	2,302	9,211	1,189	
	8,48,840	22,614	8,63,973	57,883	.....	2,47,233	69	11,47,963	19,28,261	13,031,612	5,60,730	165	2,59,323	9,550	1,416	.....	.....	4,773	2,810	13,151	1,059	

## III.

## IMPORTS INTO CALCUTTA.

The following statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of November 1900.

SPECIFICATION OF ROUTES.	FOOD-GRAINS.						FIBROUS PRODUCTS.		OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	Coal and Coke.	Indigo.	SUGAR.			TOBACCO.		
	Rice.	Paddy.	Wheat.	Wheat flour.	Gram and pulses.	Other food-grains.	Jute, raw.	Gunny-bags.	Linseed.	Mustard seed.						Refined.	Un-refined.	Molasses.	Unmanufactured.	Manufactured.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
By country boats	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	
... 6,76,498	6,76,498	89,833	20,293	3	1,16,648	1,404	10,68,566	700,634	13,108	1,500	.....	34	110	12,924	5	436	1,100	15,115	5,281	853	
.. river steamers	20,580	1,500	3,872	.....	2,784	526	14,45,104	6,825	2,660	450	1,54,712	202	119	18	108	.....	102	.....	111	903	
E. I. Railway	2,75,230	42,837	1,45,364	5,877	1,19,946	30,886	1,65,634	75,070	42,516	60,858	683	49,924	509	64,33,113	.....	.....	526	7,669	4,749	118	
E. B. S. Railway.	1,04,419	1,618	2,703	6	64,732	259	14,12,314	988,575	6,902	83	61,216	74	192	.....	.....	941	49	12,573	.....		
" rail	Assam-Bengal Railway.	397	.....	.....	.....	.....	10,732	6,125	.....	459	37,417	262	.....	.....	.....	.....	.....	.....	.....		
Bengal-Nagpur Railway.	6,123	.....	.....	.....	.....	.....	99	70	.....	.....	.....	81	.....	.....	.....	.....	.....	.....	.....		
Bengal Central Railway.	1,824	.....	.....	.....	948	.....	1,13,376	1,785	855	.....	.....	5	.....	.....	.....	1,828	.....	136	.....		
" road	67,807	10,119	.....	57	43	.....	1,51,402	23,200	23	.....	.....	1,040	.....	6,100	.....	2,431	12,433	6,025	833		
" sea	23,660	3,113	.....	.....	6,857	215	10,604	1,400	.....	.....	2,123	4,818	.....	191	8	9,112	.....	5,837	334		
Grand Total of Imports in November	1900	11,73,538	1,48,410	1,75,237	5,925	3,41,988	33,280	44,08,031	1,934,334	68,133	72,456	2,55,263	56,870	930	64,58,351	121	9,568	6,928	35,346	35,612	3,010
	1899	12,46,453	2,31,740	2,10,386	.....	4,69,196	52,091	33,75,591	1,005,146	9,24,800	1,78,997	2,37,491	46,069	1,179	47,94,416	14,464	1,746	61,769	.....	33,299	5,084

## IV.

## EXPORTS FROM CALCUTTA.

The following Statement shows the Values and Quantities of the Principal Staples of Traffic, exported Inland from Calcutta by Rail, Road, River (Country-boat and Steamer), the Calcutta Canals and coasting vessels during the month of November 1900:—

Whither exported.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	KEROSENE OIL.		Gunny-bags.
	European.	Indian.	European.	Indian.		From Calcutta.	From Budge Budge.*	
1	2	3	4	5	6	7	8	9
<b>BENGAL.</b>								
Burdwan	2,71,902	.....	370	968	55,547	336	7,728	77,276
Birbhum	1,36,584	1,675	92	1,204	15,447	17	3,890	114,800
Midnapore	4,64,418	.....	2,120	506	18,550	410	3,656	62,355
Hoochly	1,35,361	6,432	270	37	8,310	2,945	1,000	37,251
24-Parganas	2,70,474	9,432	1,023	.....	24,250	9,690	3,796	32,610
Calcutta	2,46,041	.....	1,918	362	21,700	702	8,025	59,688
Nadia	1,33,602	.....	84	164	11,975	15	1,305	49,432
Murshidabad	.....	.....	967	.....	26,740	4,891	2,214	25,470
Jessore	90,586	.....	.....	52	4,054	425	363	455
Kulna	72,576	.....	.....	.....	70	13,918	2	4,156
Baisahali	2,24,721	.....	189	.....	133	9,829	17	50,120
Dinajpur	1,19,120	.....	.....	.....	133	9,829	17	50,120
Malda	1,50,748	.....	18	308	9,509	38	2,970	4,065
Malda	95,619	350	128	300	3,472	37	2,488	3,570
Darjeeling	4,79,194	70	125	215	15,169	46	4,882	20,370
Rangpur	2,65,394	.....	117	63	7,030	.....	999	36,785
Bogra	1,70,067	.....	203	53	25,741	14	10,845	12,460
Pabna	47,552	.....	98	693	2	.....	665	.....
Cooch Behar	7,48,104	735	8,164	40	51,060	1,616	2,600	10,850
Dacca	4,65,850	1,190	364	69	14,313	.....	1,075	3,220
Mymensingh	1,24,146	245	785	190	23,480	9,386	2,482	17,430
Faridpur	4,34,618	.....	1,707	.....	66,135	5,581	3,167	61,985
Backergunge	2,87,767	.....	1,405	.....	14,662	8	2,000	12,810
Tippera	20,401	.....	343	.....	4,270	300	.....	245
Nowkhali	2,55,982	.....	419	.....	.....	.....	41	44,650
Chittagong	.....	.....	.....	.....	.....	.....	.....	.....
Total of Bengal	57,14,881	20,040	18,977	4,825	4,26,429	39,305	1,78,140	740,047
<b>BIHAR.</b>								
Patna	1,60,375	.....	269	404	10,050	85	10,401	93,356
Gaya	1,43,433	11,025	23	45	24,098	.....	1,440	7,700
Shahabad	3,37,180	.....	44	54	16,387	18	825	18,305
Baran	2,01,083	.....	52	49	16,204	61	2,348	14,525
Champaran	1,23,135	.....	.....	.....	3,000	.....	3,313	34,545
Muzaffarpur	2,14,226	.....	.....	254	12,832	7	4,191	24,835
Darbhanga	3,03,217	.....	.....	286	31,662	74	2,902	35,680
Monghyr	2,00,024	.....	.....	580	16,448	51	2,860	110,775
Bhagalpur	3,01,805	4,235	27	556	25,332	.....	4,06	60,035
Purnea	2,85,792	.....	.....	770	10,176	8	3,262	36,330
Maldia	33,283	.....	36	240	7,466	.....	1,327	23,565
Sonthal Parganas	1,85,434	.....	128	1,615	14,822	.....	3,757	54,670
Total of Bihar	25,64,971	15,200	519	4,851	1,91,913	298	40,632	508,775
<b>ORISSA.</b>								
Guttack	30,054	.....	4	93	1,497	241	290	12,495
Balasore	67,281	.....	546	2,540	21,978	916	1,599	91,200
Total of Orissa	97,335	.....	530	2,633	23,475	1,157	1,889	103,695
<b>CHOTA NAGPUR.</b>								
Hazaribagh	50,374	4,935	.....	261	9,583	.....	9,027	2,170
Manbhum	74,497	3,150	.....	606	17,039	69	1,742	11,165
Singhbhum	36,316	.....	.....	100	4,876	51	388	13,895
Total of Chota Nagpur	1,61,187	8,085	.....	1,027	32,398	120	4,157	27,230
Grand Total of Supplies into the Provinces under the Lieutenant-Governor of Bengal	84,78,374	43,394	17,040	18,338	6,73,315	40,970	2,25,827	1,385,647
<b>OTHER PROVINCES.</b>								
Assam	13,17,009	1,931	1,100	1,392	57,795	748	16,550	13,720
North-Western Provinces and Oudh	12,31,007	16,541	1,145	134	25,442	124	48,111	646,555
Punjab	2,06,343	13,499	212	11	.....	15	8,530	117,065
Central Provinces	1,48,706	.....	93	.....	.....	173	7,321	73,815
Rajputana and Central India	31,541	.....	26	12	.....	2	1,236	15,575
Berar	16,345	.....	.....	.....	.....	.....	.....	12,045
Bombay	46,233	8,394	.....	.....	.....	.....	.....	2,213,200
Madras	30,975	525	39	73	.....	.....	468	360,200
Pondicherry	.....	.....	.....	.....	.....	.....	.....	57,600
Burma	1,26,862	6,310	726	1,494	1	222	.....	1,931,109
Sind	.....	.....	92	.....	.....	.....	.....	102,000
Grand Total of Exports in November	1,17,30,447	90,494	20,577	16,452	7,56,553	42,254	5,07,973	6,968,462
1899	1,16,60,663	1,67,459	20,897	16,372	7,65,076	4,00,361	1,594,193	1,594,193

\* Represents the trade registered at the traffic registering stations only.

## V.

The Sea-borne Trade of Calcutta in these Staples during the month of November 1900 was as follows:—

IMPORTED INTO CALCUTTA.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	Kerosine oil.	Gunny-bags.
	European.	Indian.	European.	Indian.			
1	2	3	4	5	6	7	8
on Foreign Ports—			Rs.	Rs.	Mds.	Mds.	Mds.
United Kingdom	...	23,78,029	.....	7,686	.....	8,90,151	.....
Other foreign ports	...	2,24,724	.....	258	267	6,36,401	2,09,530
Total of Foreign Trade	...	96,13,383	.....	7,314	267	9,70,701	2,09,530
on Indian Ports—							No.
Bombay	...	1,08,364	3,42,066	.....	18,019	4,158	.....
Madras	...	12,370	22,087	4	.....	.....	.....
Other ports in Madras	...	545	409	.....	.....	.....	.....
Barma	...	19,220	820	.....	.....	91,145	.....
Other Indian Ports	...	.....	.....	437	.....	.....	1,400
Sind	...	.....	.....	.....	.....	.....	.....
Total of Interportal Trade	...	1,40,429	3,66,263	437	18,023	4,178	91,145
Grand Total of Imports in November	1900	97,53,813	3,65,263	7,751	18,270	9,69,969	3,60,675
	1899	1,00,41,979	6,25,657	10,267	18,823	11,75,971	5,41,580
							1,400

\* As per tariff declaration value.

## VI.

The following Statement shows the several Routes followed by the Trade in the above Principal Staples of Traffic exported from Calcutta during the month of November 1900:—

SPECIFICATION OF ROUTES.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	KEROSENE OIL.		Gunny-bags.
	European.	Indian.	European.	Indian.		From Calcutta.	From Budget-Budget.	
1	2	3	4	5	6	7	8	9
By country boats		Rs.	Rs.	Mds.	Mds.	Mds.	Mds.	No.
“ river steamers	...	2,22,400	6,306	1,053	.....	2,69,725	30,539	11,301
“ East Indian Railway	...	29,64,223	2,073	8,396	1,414	1,20,140	599	82,120
“ Eastern Bengal State Railway	...	48,51,059	54,960	2,246	8,250	2,86,616	915	1,21,295
“ rail	Assam-Bengal Railway	24,34,345	2,590	4,726	2,005	39,099	1,255	1,21,210
“	Bengal-Narpur Railway	4,14,109	.....	1,463	17	2,914	48	6,090
“ road	Bengal-Central Railway	83,306	.....	.....	823	891	73	15,595
“ sea	.....	1,73,086	791	.....	.....	10,398	672	2,800
Grand Total of Imports in November	1900	1,17,20,447	90,404	20,577	16,452	7,16,553	42,254	3,07,973
	1899	1,16,69,453	1,07,459	20,897	16,372	7,65,076	4,03,364	1,894,193

STATISTICAL DEPARTMENT,

The 15th February 1901.

F. A. SLACKE,

Secy. to the Govt. of Bengal.



IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1900-1901.  
Areas leased for Irrigation up to end of December 1900.

CIRCLE.	District.	Canal.	DETAILS OF AREAS LEASED.												Rainfall, 1900-1901.		Rainfall, 1899-1900.		REMARKS.		
			Season leases.						Long-term leases.						Grand Total.	During month.	Up to end of month.	During month.	Up to end of month.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
ORISSA	Cuttack	Teljanda, 1st reach ...	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	0. ft.	Kulesi.
		Litto, 2nd " ...	1,342	141	566	58	3	18,521	18,521	18,221	98	2	.....	.....	100	18,321	0'00	68'20	0'29	55'71	
		Maghnaon ...	766	103	16	37,103	36,391	38,885	207	.....	.....	.....	.....	.....	218	37,103	{ 0'00	59'58	0'00	35'60	Balia.
		Kendrapara ...	1,067	274	23	53,212	53,870	51,320	1,796	26	.....	.....	.....	.....	1,829	53,212	{ 0'00	55'73	0'00	55'14	Kendrapara.
		Gobri ...	373	59	45	8,744	8,739	8,744	.....	.....	.....	.....	.....	.....	3,744	0'00	61'97	0'00	53'23	Kendrapara.	
		Do. Extension ...	648	46	12	8,339	8,457	8,330	.....	.....	.....	.....	.....	.....	8,330	0'00	85'12	0'00	59'52	Ieaspur.	
		Patamundi ...	885	79	33	15,809	14,731	14,755	840	181	.....	.....	.....	.....	1,021	15,809	0'00	66'33	0'30	57'81	Nurtang.
		High Level, Range I ...	608	164	5	22,550	22,599	22,576	.....	190	7	.....	.....	.....	197	22,773	0'00	82'62	0'00	65'09	Jaspur.
		Ditto, do. II ...	727	8	.....	3,318	3,045	3,318	.....	.....	.....	.....	.....	.....	3,318	.....	No gauge.	.....	.....		
		Jaipur Canal, including Dudhat Channel ...	700	81	.....	10,068	10,857	9,923	.....	445	70	.....	.....	.....	515	10,487	0'00	75'15	0'00	55'46	Jaipur.
		High Level, Range III ...	727	57	6	31,533	30,943	30,483	.....	677	443	.....	.....	.....	1,120	31,693	0'00	86'11	0'00	56'03	Akhoyapada.
		Total ...	.....	.....	.....	198,070	197,162	194,651	2,958	1,624	520	.....	.....	.....	4,906	199,650	.....	.....	.....	.....	
		Total of the corresponding period of last year ...	.....	.....	.....	.....	.....	171,902	24,375	18	203	.....	.....	234	25,030	196,932	.....	.....	.....	.....	
SOUTH-WEST- BENG.	Midnapore	Midnapore ...	1,411	66'00(a)	.....	70,469	62,185	61,823	8,596	.....	.....	.....	.....	.....	8,583	70,414	1'07	64'23	0'00	65'43	(a) Whole month discharging.
		Panchkura ...	522	24'73(b)	0'60	9,019	9,464	7,749	1,275	.....	.....	.....	.....	.....	1,275	9,024	0'31	60'65	0'00	74'80	(b) 10 days discharging.
	Howrah	Tidal Reaches, Ranges I & II ...	.....	.....	.....	1,635	131	1,467	168	.....	.....	.....	.....	.....	168	1,635	0'20	66'47	.....	.....	
		Total ...	.....	.....	.....	61,123	64,720	71,044	10,024†	.....	.....	.....	.....	.....	10,020	81,073	.....	.....	.....	.....	
		Total of the corresponding period of last year ...	.....	.....	.....	.....	.....	70,368	494	.....	.....	.....	.....	494	70,562	.....	.....	.....	.....		
BENG.	Shahabad	Western Main ...	4,342	3,292	434	26,401	33,490	13,080	5,539	8,614	.....	.....	379	14,523	28,203	{ 0'97	31'88	0'00	46'20		
		Buxar ...	1,296	725	191	104,366	114,617	72,962	10,213	18,731	.....	.....	2,613	31,587	104,549						
		Arrah ...	2,600	1,082	543	175,260	188,429	143,632	7,555	15,380	.....	.....	10,758	33,704	177,326	0'49	36'23	0'00	50'68		
		Eastern Main ...	1,468	668	185	2,984	3,256	2,161	692	192	.....	.....	.....	884	2,985	{ 0'13	42'56	0'00	51'16		
		Patna ...	.....	86,517	85,712	65,486	13,463	4,184	.....	.....	1,273	18,875	84,361	.....	.....	.....	.....	.....	.....		
		Total ...	.....	.....	.....	326,528	425,504	297,851	37,470	47,031	.....	.....	15,072	99,573	307,424	.....	.....	.....	.....		
		Total of the corresponding period of last year ...	.....	.....	.....	.....	288,551	27,905	63,810	.....	.....	22,009	113,724	402,975	.....	.....	.....	.....	.....		
		GRAND TOTAL ...	.....	.....	.....	675,621	687,380	563,549	50,451	48,555	520	.....	15,072	114,598	678,147	.....	.....	.....	.....		
		Grand Total of the corresponding period of last year ...	.....	.....	.....	580,821	52,480	64,823	203	.....	22,243	139,248	670,040	.....	.....	.....	.....	.....	.....		

\* Of this 2,941 acres represent provisional lease.  
† This is exclusively for provisional lease.

CALCUTTA,  
The 19th February 1901.

A. H. C. MACCARTHY,  
Under-Secy. to the Govt. of Bengal.

## GOVERNMENT OF BENGAL, IRRIGATION DEPARTMENT.

*Approximate Return of Traffic on the Circular and Eastern Canals for the week ending Saturday, the 16th February 1901, as compared with the corresponding week of the previous year.*

NATURE OF CARGO.	WEEK ENDING SATURDAY, THE 16TH FEBRUARY 1901.			WEEK ENDING SATURDAY, THE 17TH FEBRUARY 1900.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
Rice and paddy	...	900	2,03,975	3,248	1,547	4,21,050
Jute	...	79	33,475*	467	41	21,950
Firewood	...	48	43,325	615	78	59,325
Other articles	...	523	1,44,880	1,817	916	2,18,595
Total	...	1,553	4,25,655	6,177	2,582	7,20,120
						11,427

\* Weight by canal measurement—30,075 maunds.

## BENGAL-NAGPUR RAILWAY.

*Abstract of principal commodities carried during the month of August 1900 as compared with the corresponding period of the previous year.*

ARTICLES.	1900.		1899.		Total, 1900.	Total, 1899.	Increase.	Decrease.
	Up.	Down.	Up.	Down.				
I.—Apparel, including drapery, haberdashery, millinery, uniforms, accoutrements, boots and shoes.	5	6	.....	.....	11	.....	11	.....
II.—Coal and coke carried for the public and foreign railways.	12,186	35,825	9,558	28,083	46,011	37,641	10,370	.....
III.—Cotton—								
1. Raw .....	4	28	44	418	33	465	.....	430
2. Manufactured—								
(a) Twist and yarn, European .....	2	13	8	67	15	75	.....	60
(b) Ditto, Indian .....	40	414	72	474	463	546	.....	83
(c) Piece-goods, European .....	66	38	63	24	104	87	17	.....
(d) Ditto, Indian .....	18	165	26	77	183	103	80	.....
(e) Others .....	1	2	.....	3	.....	3	.....	.....
IV.—Chemicals excepting saltpetre .....	3	1	.....	.....	4	.....	4	.....
V.—Drugs—								
1. Intoxicating, other than opium.	.....	1	.....	1	1	1	.....	.....
2. Non-intoxicating—								
(a) Medicinal preparations .....	3	.....	4	.....	2	.....	2	.....
(b) Others .....	14	4	4	3	18	7	11	.....
VI.—Dyes and Tans—								
1. Al (morinda citrifolia) .....	.....	.....	1	.....	.....	1	.....	1
2. Alizarine and aniline dyes .....	.....	.....	5	.....	.....	12	8	.....
3. Cutch .....	17	3	7	.....	3	1	2	.....
4. Indigo .....	2	1	1	.....	3	1	2	.....
5. Myrabolams .....	99	136	103	15	235	118	117	.....
6. Tanning barks .....	.....	.....	.....	.....	.....	.....	.....	.....
7. Turmeric .....	29	16	30	8	45	38	7	.....
8. Others .....	13	11	22	5	24	27	.....	3
VII.—Fodder—								
1. Oilcake .....	29	1	.....	.....	30	.....	30	.....
2. Hay, straw and grass .....	129	29	.....	.....	158	.....	158	.....
VIII.—Fruits and vegetables, fresh .....	20	85	.....	.....	105	.....	105	.....
IX.—Grain and Pulse—								
1. Gram and pulse .....	2,521	628	3,188	258	3,044	3,446	.....	402
2. Jowar and bajra .....	19	1	1	206	13	207	.....	194
3. Rice in the husk .....	1,302	85	12	243	1,587	265	1,132	.....
4. ....., not in the husk .....	11,483	816	4,484	1,842	12,299	6,326	5,973	.....
5. Wheat .....	1,849	46	3,175	47	1,865	3,222	.....	1,327
6. ....., flour .....	39	22	.....	.....	61	.....	61	.....
7. Others .....	240	14	19	91	254	110	144	.....
X.—Hides and skins—								
1. Hides of cattle—								
(a) Dressed or tanned .....	.....	.....	.....	.....	.....	.....	.....	.....
(b) Raw .....	78	260	118	223	338	341	.....	3
2. Skins of sheep ....., and other animals—								
(a) Dressed or tanned .....	.....	.....	1	.....	.....	5	.....	3
(b) Raw .....	1	1	1	4	2	5	.....	3
XI.—Horns .....	10	11	13	12	21	25	.....	4
XII.—Hemp (Indian) and other fibres, excluding jute.	1	58	.....	.....	59	.....	59	.....
XIII.—Jute—								
1. Raw .....	1	1	.....	.....	2	.....	2	.....
2. Gunny-bags and cloth .....	70	121	156	39	191	195	.....	4
XIV.—Lac .....	63	267	115	748	330	863	.....	533
XV.—Leather—								
1. Unwrought .....	1	1	5	1	2	6	.....	4
2. Wrought excepting boots and shoes.	.....	1	.....	.....	1	.....	1	.....
XVI.—Liquors—								
1. Ale and beer .....	7	41	9	39	48	48	.....	2
2. Spirits of all kinds, including country spirit.	4	3	7	2	7	9	.....	2
3. Wines .....	6	1	7	1	7	8	.....	1
4. All other sorts, including toddy and fermented liquor, other than ale and beer.	.....	.....	.....	.....	.....	.....	.....	.....
XVII.—Metals—								
1. Brass, unwrought .....	1	2	.....	.....	3	.....	3	.....
2. ....., wrought .....	34	70	5	17	104	22	82	.....
3. Copper, unwrought .....	.....	1	.....	1	.....	1	.....	1
4. ....., wrought .....	1	19	1	1	20	2	18	.....
5. Iron and steel—								
(a) Cast .....	8	1	1	1	9	2	7	.....
(b) Unwrought .....	1	.....	.....	.....	1	96	.....	96
(c) Wrought .....	323	86	125	95	468	320	188	.....
(d) Manufactures .....	96	38	67	35	134	102	32	.....
6. Others .....	1,923	24	8	13	1,946	21	1,925	.....
XVIII.—Oils—								
1. Kerosine .....	473	76	278	32	549	310	239	.....
2. Castor .....	11	6	19	1	17	20	.....	3
3. Cocoonut .....	8	12	7	1	20	8	12	.....
4. Mustard and rape .....	14	2	.....	.....	16	.....	16	.....
5. Others .....	33	4	30	6	37	36	1	.....

ARTICLES.	1900.		1899.		Total, 1900.	Total, 1899.	Increase.	Decrease.
	Up.	Down.	Up.	Down.				
<b>XIX.—Oilsseeds—</b>			Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1. Peanut ... ... ...	3	1	... ...	81	4	81	... ...	77
2. Earthnuts ... ... ...	... ...	... ...	1	1	1	1	... ...	1
3. Linseed ... ... ...	1	1	337	52	2	389	... ...	387
4. Poppy ... ... ...	3	1	7	... ...	4	7	... ...	3
5. Rape and mustard ...	7	11	16	... ...	18	68	... ...	60
6. Til or jinjilli ...	65	135	235	266	200	501	... ...	301
7. Others ... ... ...	40	27	393	94	86	437	... ...	401
<b>XX.—Opium ... ... ...</b>	1	... ...	1	... ...	1	1	... ...	... ...
<b>XXI.—Paper and pasteboard ...</b>	61	1	15	1	52	16	36	... ...
<b>XXII.—Provisions—</b>								
1. Dried fruits and nuts ...	24	218	11	34	242	45	197	... ...
2. Grapes ... ... ...	35	121	12	211	156	223	... ...	67
3. Others ... ... ...	70	64	138	54	114	192	... ...	78
<b>XXIII.—Railway plant and rolling-stock carried for the public and foreign railways—</b>			1	... ...	1	... ...	1	... ...
1. Locomotive engines and tenders and parts thereof.	... ...	... ...	18	7	... ...	25	... ...	26
2. Carriages and trucks and parts thereof.	... ...	... ...	4	... ...	... ...	4	... ...	4
3. Materials—								
(a) Steel rails and fish-plates.	... ...	1	1	... ...	1	1	... ...	... ...
(b) Sleepers and keys of steel and cast-iron.	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
(c) Others ... ... ...	130	2,039	681	3,306	2,177	3,987	... ...	1,810
<b>XXIV.—Salt ... ... ...</b>	740	573	657	302	1,313	959	324	... ...
<b>XXV.—Saltpetre and other saline substances—</b>								
1. Saltpetre ... ... ...	4	1	1	... ...	5	1	4	... ...
2. Other saline substances ...	5	3	2	1	6	3	3	... ...
<b>XXVI.—Silk—</b>								
1. Raw—								
(a) Foreign ... ... ...	... ...	... ...	3	5	12	8	4	... ...
(b) Indian ... ... ...	6	6	3	5	12	8	4	... ...
2. Piece-goods—								
(a) Foreign ... ... ...	... ...	1	1	... ...	4	1	3	... ...
(b) Indian ... ... ...	5	1	1	... ...	4	1	3	... ...
<b>XXVII.—Spices—</b>								
1. Betel-nuts ... ... ...	148	6	30	4	154	34	120	... ...
2. Cardamoms ... ... ...	... ...	... ...	1	... ...	1	... ...	1	... ...
3. Chillies ... ... ...	34	68	6	11	92	17	75	... ...
4. Ginger ... ... ...	1	1	2	1	2	3	1	... ...
5. Pepper ... ... ...	2	... ...	7	2	7	5	5	... ...
6. Others ... ... ...	147	5	104	13	152	117	35	... ...
<b>XXVIII.—Stone and lime ...</b>	122	958	122	1,028	1,050	1,150	... ...	70
<b>XXIX.—Sugar—</b>								
1. Refined or crystallized, including suucandy.	140	34	91	79	174	170	4	... ...
2. Unrefined—								
(a) Sugar ... ... ...	67	69	93	13	129	106	23	... ...
(b) Gur, rab, jaggery, molasses, and others, saccharine produce.	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
<b>XXX.—Tea—</b>								
1. Foreign ... ... ...	... ...	... ...	2	... ...	31	32	... ...	... ...
2. Indian ... ... ...	3	28	2	30	31	32	... ...	1
<b>XXXI.—Tobacco—</b>								
1. Unmanufactured ...	122	20	90	37	142	127	15	... ...
2. Manufactured—								
(a) Cigars ... ... ...	1	1	1	1	2	1	1	... ...
(b) Other sorts ...	9	7	6	5	16	11	5	... ...
<b>XXXII.—Wood—</b>								
1. Timber, unwrought ...	415	2,110	823	930	2,525	1,753	772	... ...
2. Manufactured ...	86	26	... ...	... ...	62	... ...	62	... ...
<b>XXXIII.—Wool—</b>								
1. Raw								
2. Manufactured ...	... ...	3	1	... ...	4	... ...	4	... ...
(a) Carpets and rugs ...	3	1	... ...	... ...	2	... ...	2	... ...
(b) Piece-goods, European ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
(c) Ditto, Indian ...	1	4	1	1	5	3	3	... ...
(d) Other sorts of manufacturers.	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
<b>XXXIV.—All other articles of merchandise—</b>								
1. Firewood ... ... ...	215	204	266	232	619	498	21	... ...
2. Bamboo ... ... ...	91	114	118	85	205	203	3	... ...
3. Moha ... ... ...	181	31	93	95	212	188	24	... ...
4. Others ... ... ...	548	261	694	264	899	1,068	240	... ...
<b>Total</b> ...	36,891	46,518	26,962	40,501	83,409	67,483	22,560	6,614
					Net increase ...	15,946	... ...	... ...

L. GREENHAM,  
For Auditor, B.-N. Railway.

## BENGAL AND NORTH-WESTERN RAILWAY.

Statement of goods traffic for the month of November 1900, compared with the corresponding period in 1899.

DESCRIPTION OF GOODS.	1899.		1900.		Increase.		Decrease.		Explanation of fluctuations by the Traffic Manager.
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	
<b>XIX.—Oilsseeds—</b>									Stocks cleared early in the season.
1. Castor ... ...	88	83	480	686	302	603	.....	.....	
2. Earthnuts ... ...	.....	.....	5,982	5,982	706	2,291	.....	.....	
3. Linseed ... ...	2,738	.....	415	123	626	.....	14	14	
4. Poppy ... ...	136	415	2,278	819	2,565	.....	307	1,713	
5. Rape and mustard ...	1,126	.....	.....	.....	7	22	10	.....	
6. Til or jinjil ...	1	3	.....	.....	6	10	.....	.....	
7. Others ... ...	2,194	7,483	604	2,476	.....	.....	1,590	5,007	
<b>XX.—Opium</b> ... ...	17	183	7	67	.....	.....	10	116	
<b>XXI.—Paper and Pasteboard</b> ...	10	68	31	179	21	111	.....	.....	
<b>XXII.—Provisions—</b>									
1. Dried fruits and nuts ...	75	1,074	160	1,682	85	608	.....	.....	
2. Ghee ... ...	198	628	406	2,137	298	1,500	.....	.....	
3. Others ... ...	762	3,083	644	2,607	.....	.....	118	476	
<b>XXIII.—Railway Plant and Rolling Stock carried for the Public and Foreign Railways—</b>									
1. Locomotive engines and tenders and parts thereof.	.....	.....	.....	.....	.....	.....	.....	.....	
2. Carriages and trucks and parts thereof.	.....	.....	.....	.....	.....	.....	.....	.....	
3. Materials—									
(a) Steel rails and fish-plates.	.....	.....	.....	.....	.....	.....	.....	.....	
(b) Sleepers and keys of steel and cast-iron.	10	7	1	3	.....	.....	9	4	
(c) Others ... ...	.....	.....	.....	.....	.....	.....	.....	.....	
<b>XXIV.—Salt</b> ... ...	5,843	15,586	6,418	15,452	575	2,866	.....	.....	
<b>XXV.—Saltpetre and other saline substances—</b>									
1. Saltpetre ... ...	1,079	3,530	538	5,259	.....	1,700	541	.....	
2. Other saline substances	.....	.....	3	14	3	14	.....	.....	
<b>XXVI.—Silk—</b>									
1. Raw—									
(a) Foreign ... ...	.....	.....	.....	.....	.....	.....	.....	.....	
(b) Indian ... ...	1	4	.....	.....	.....	.....	1	4	
2. Piece-goods—									
(a) Foreign ... ...	.....	.....	.....	.....	.....	.....	.....	.....	
(b) Indian ... ...	.....	.....	.....	.....	.....	.....	.....	.....	
<b>XXVII.—Spices—</b>									
1. Betelnuts ... ...	96	704	181	1,268	85	564	.....	.....	
2. Cardamoms ... ...	2	16	6	44	4	28	.....	.....	
3. Chillies ... ...	26	106	14	64	.....	.....	12	42	
4. Ginger ... ...	9	69	17	138	8	60	.....	.....	
5. Pepper ... ...	26	195	30	211	4	16	.....	.....	
6. Others ... ...	127	1,081	146	1,408	19	327	.....	.....	
<b>XXVIII.—Stone and lime</b> ... ...	484	986	515	1,315	31	329	.....	.....	
<b>XXIX.—Sugar—</b>									
1. Refined or crystallised, including sugarcandy.	1,057	5,174	749	3,137	.....	.....	308	2,037	Less production Demand for jaggery in Cawnpur.
2. Unrefined—									
(a) Sugar ... ...	1,837	6,639	131	698	.....	.....	1,706	5,941	
(b) Gur, rab, jaggery, molasses and other saccharine produce.	.....	.....	850	3,819	850	3,819	.....	.....	
<b>XXX.—Tea—</b>									
1. Foreign ... ...	.....	.....	5	22	3	13	.....	.....	
2. Indian ... ...	2	9	.....	.....	.....	.....	.....	.....	
<b>XXXI.—Tobacco—</b>									
1. Unmanufactured ...	1,098	7,388	776	4,705	.....	.....	320	2,683	
2. Manufactured—									
(a) Cigars ... ...	.....	.....	3	84	3	34	.....	.....	
(b) Other sorts ...	29	273	92	401	63	218	.....	.....	
<b>XXXII.—Wood—</b>									
1. Timber, unwrought ...	.....	.....	415	2,170	415	9,170	.....	.....	
2. Logs ... ...	1,086	1,116	658	1,409	.....	290	428	.....	
3. Poles ... ...	147	220	1	6	.....	.....	146	214	
4. Manufactures ...	.....	.....	139	792	139	792	.....	.....	
<b>XXXIII.—Wool—</b>									
1. Raw ... ...	2	11	3	20	1	9	.....	.....	
2. Manufactured—									
(a) Carpets and rugs ...	.....	.....	3	26	2	26	.....	.....	
(b) Piece-goods { European	3	34	.....	.....	.....	.....	3	34	
(c) Piece-goods { Indian ...	26	195	28	279	2	84	.....	.....	
(d) Other sorts of manufactures.	.....	.....	.....	.....	.....	.....	.....	.....	
<b>XXXIV.—All other articles of merchandise—</b>									
1. Indigo-seed ... ...	60	549	141	760	81	211	.....	.....	
2. Firewood ... ...	781	1,106	806	1,486	25	380	.....	.....	
3. Others not specified above.	4,018	8,907	3,962	8,899	.....	.....	656	8	
Total ...	76,726	2,53,722	52,941	2,10,176	6,666	41,408	30,451	84,954	

GORAKHPUR,  
The 1st February 1901.

CHARLES YOUNG,  
For Auditor of Accounts.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 2nd February 1901, on 1,837.09 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total Traffic for the week ...	403,491	4,21,632 4 0	52,55,141 30	8,84,319 10 0	20,827 0 0	13,26,778 14 0	104,777	188,689	293,466
Or per mile of Railway	229 8 2	.....	.....	481 5 11	11 5 5	723 3 6	.....	.....	.....
For previous 35 weeks of half-year.	1,374,567	14,02,840 7 0	1,28,56,001 10	31,74,067 2 0	87,587 0 0	46,64,494 9 0	397,588	662,238	1,059,826
Total for 48 weeks ...	1,677,058	18,24,472 11 0	2,46,11,143 0	40,58,386 12 0	1,08,414 0 0	59,91,373 7 0	502,365	850,927	1,353,292
COMPARISON.									
Total for corresponding week of previous year.	389,482	4,34,436 14 10	47,13,380 20	9,61,855 2 6	31,897 13 7	14,28,189 14 11	107,813	186,404	294,217
Per mile of railway corresponding week of previous year.	.....	253 13 1	.....	561 15 4	18 10 2	834 6 7	.....	.....	.....
Total for corresponding weeks of previous year.	47	1,628,994	17,83,251 10 2	2,39,82,853 20	49,58,303 3 0	1,41,009 12 8	68,82,564 9 10	925,613	1,421,654

(b) The decrease is chiefly due to heavier upward despatches of food-grains in the corresponding period of 1900.

1901. Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900.

Open mileage.	Period.	Coaching Traffic.	Merchandise and Mineral Traffic.	Other earnings.	Total.	Per mile of railway.	Train mileage.	
		No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	No. Rs. A. P.
1,837.09	12 days of January	530,312	5,87,307	88,76,032	14,02,300	42,014	20,31,811	1,106 4 3 5
1,837.09	Week ended 19th "	354,516	3,90,302	52,72,154	9,04,870	22,975	13,18,150	718 4 8 4
1,837.09	" 26th "	380,349	4,25,231	52,07,815	8,66,708	22,595	13,14,534	716 4 9 6
1,837.09	" 2nd Feb. "	402,401	4,21,633	52,55,142	8,84,319	20,827	13,26,778	722 4 8 4
Totals up to date ...		1,677,058	18,24,472	2,46,11,143	40,58,387	1,08,414	59,91,373	693 4 6 10

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900—concluded.

1900.

No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	No.	Rate. Rs. A. P.
506,641	6,65,195	87,39,374	18,36,800	46,519	25,48,514	1,459	534,367	4 12 4
320,577	3,31,459	59,37,540	10,71,643	31,629	14,34,731	838	303,813	4 11 7
322,204	352,160	54,92,659	10,88,005	30,964	14,71,129	860	289,257	5 1 4
389,483	4,34,437	47,13,281	9,61,855	31,898	14,28,190	834	294,217	4 13 8
Totals up to date ...	1,628,995	17,83,251	2,39,82,854	49,58,303	1,41,010	68,82,564	828	1,421,654

## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 2nd February 1901, on 22.23 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	23,740	6,006 14 0	34,494 10	703 15 0	5 0 0	6,895 10 0	1,066	123	1,188
Or per mile of railway	274 4 3	.....	.....	35 11 3	0 3 7	310 3 1	.....	.....	.....
For previous 35 weeks of half-year	75,375	18,640 8 0	1,33,366 20	9,990 4 0	23 0 0	21,663 12 0	3,944	569	4,413
Total for 48 weeks ...	99,115	24,737 6 0	1,67,860 30	3,784 0 0	28 0 0	28,849 6 0	4,910	601	5,601
COMPARISON.									
Total for corresponding week of previous year ...	21,628	5,925 6 5	18,974 10	781 3 0	7 6 3	6,013 15 8	1,048	140	1,188
Per mile of railway corresponding week of previous year ...	.....	235 1 0	.....	35 2 3	0 5 4	270 8 7	.....	.....	...
Total for corresponding 48 weeks of previous year ...	101,213	23,956 0 11	1,41,514 10	3,844 1 0	48 0 9	27,848 2 8	5,127	1,300	6,427

## TARKESSUR BRANCH RAILWAY—concluded.

1901.

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900.

Open mileage.	Period.	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings.	Total.	Per mile of railway.	Train mileage.	Rate.
22'23	13 days of January ...	No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	No.	Rs. A. P.
		32,815	7,786	61,722	1,378	11	9,175	413	2,037	4 8 1
22'23	Week ending 19th January ...	29,734	5,526	35,924	729	6	6,261	283	1,188	5 4 4
22'23	" " 26th " ...	19,826	5,328	35,721	883	6	6,217	280	1,188	5 3 9
22'23	" " 2nd February ...	23,740	6,007	34,494	794	5	6,896	310	1,118	5 12 11
	Totals up to date ...	99,115	24,737	167,861	3,784	28	26,549	272	5,601	5 1 7

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900—concluded.

1900.

		No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	No.	Rs. A. P.
22'23	13 days of January ...	38,632	5,899	35,048	1,591	16	10,418	409	2,345	4 7 1
22'23	Week ending 19th January ...	19,740	4,015	14,487	505	10	5,130	231	1,596	3 3 5
22'23	" " 27th " ...	21,810	5,216	72,105	1,057	15	6,288	283	1,908	4 13 6
22'23	" " 3rd February ...	21,623	5,226	15,974	781	7	6,014	271	1,188	5 1 0
	Totals up to date ...	101,214	23,986	1,41,514	3,844	48	27,848	258	6,427	4 8 4

## DELHI-UMBALLA-KALKA RAILWAY.

Approximate Return of Traffic for week ended 2nd February 1901, on 162'24 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	16,992	Rs. A. P.	Mds. a.	Rs. A. P.	Rs. A. P.	Rs. A. P.	7,195	3,686	10,881
Or per mile of railway ...	85 1 6	13,805 8 0	1,66,835 0	12,441 2 0	67 0 0	26,313 10 0	.....	.....	.....
For previous 3½ weeks of half-year ...	56,287	45,712 8 0	5,44,706 20	42,801 6 0	246 0 0	85,759 14 0	28,517	12,625	41,042
Total for 4½ weeks ...	73,279	59,518 0 0	7,11,621 20	55,942 8 0	313 0 0	1,15,073 8 0	35,712	16,211	51,923
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	14,654	11,936 10 9	86,775 10	9,447 13 0	78 5 0	21,462 12 9	6,847	3,411	10,258
Per mile of railway corresponding week of previous year ...	73 9 2	.....	88 3 9	0 7 9	132 4 8	.....	.....	.....	.....
Total for corresponding 4½ weeks of previous year ...	71,533	60,040 5 7	4,46,024 20	53,480 12 3	385 11 6	1,13,915 13 4	34,024	15,056	49,080

1901.

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900.

Open mileage.	Period.	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings.	Total.	Per mile of railway.	Train mileage.	Rate.
162'24	13 days of January ...	No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	No.	Rs. A. P.
162'24	Week ended 19th January ...	25,949	22,231	2,49,288	17,745	113	40,089	247	16,658	2 2 4
162'24	" " 26th " ...	15,354	12,114	1,42,393	1 2,54	65	24,727	152	11,258	2 3 2
162'24	" " 2nd February ...	14,984	11,987	1,60,116	12,508	68	23,943	148	11,096	2 2 2
	Totals up to date ...	51,303	13,506	1,66,826	12,441	67	26,314	162	10,881	2 6 8

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900—concluded.

1900.

		No. of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	Rs.	No.	Rs. A. P.
162'24	13 days of January ...	28,533	26,096	1,85,104	23,085	123	49,904	303	19,454	2 8 5
162'24	Week ended 19th January ...	14,207	10,655	78,419	11,799	44	22,528	139	9,672	2 5 3
162'24	" " 27th " ...	14,194	10,423	96,926	10,158	140	20,721	128	9,686	2 5 3
162'24	" " 3rd February ...	14,684	11,936	86,775	9,448	79	21,463	132	10,258	2 1 6
	Totals up to date ...	71,533	60,040	4,46,024	53,490	386	1,13,916	145	49,080	2 5 2

## SOUTH BEHAR RAILWAY.

Approximate Return of Traffic for week ended 2nd February 1901, on 78.76 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	9,801	Rs. A. P. 4,415 15 0 66 1 1	Mds. S. 52,019 20 .....	Rs. A. P. 3,138 1 0 39 13 6	Rs. A. P. 43 0 0 0 8 9	Rs. A. P. 7,697 0 0 96 7 4	1,684	1,304	2,978
Or per mile of railway ...	.....						.....	.....	.....
For previous 3½ weeks of half-year ...	33,539	17,154 0 0	1,74,135 30	13,494 13 0	160 0 0	30,808 13 0	6,602	3,673	10,275
Total for 4½ weeks ...	45,340	21,569 15 0	2,26,155 10	16,632 14 0	203 0 0	38,406 13 0	4,286	4,567	13,253
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	10,624	5,159 5 0	56,604 20	4,32 3 0	21 9 6	9,313 1 6	1,548	678	2,226
Per mile of railway corresponding week of previous year ...	.....	65 8 1	.....	52 7 5	0 4 5	118 3 11	.....	.....	.....
Total for corresponding 4½ weeks of previous year ...	40,963	23,657 14 7	2,72,081 10	19,932 9 0	109 2 6	43,639 10 1	7,339	3,473	10,812

1901.

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900.

Open mileage.	Period.	Coaching Traffic.	Merchandise and Mineral Traffic.	Other earnings.	Total.	Per mile of railway.	Train mileage.
		Number of passengers.	Rs.	Mds.	Rs.	Rs.	Rs. A. P.
78.76	12 days of January ...	16,080	7,558	74,139	5,321	75	12,964
78.76	Week ended 19th "	10,001	5,127	46,663	4,659	43	9,829
78.76	" 26th "	9,458	4,469	54,334	3,515	42	8,020
78.76	" 2nd Feb. "	9,801	4,416	52,019	3,138	43	7,597
	Totals up to date ...	45,340	21,569	2,26,155	16,633	203	38,406
							103
							13,253
							2 14 4

Abstract of progressive weekly returns of all earnings for 1901 in comparison with 1900—concluded.

1900.

		Number of passengers.	Rs.	Mds.	Rs.	Rs.	Rs.	No.	Rs. A. P.
78.76	13 days of January ...	19,319	9,099	94,726	6,991	53	16,144	205	4,134
78.76	Week ended 20th "	9,895	4,425	60,658	4,221	12	8,658	110	2,226
78.76	" 27th "	10,125	4,975	60,693	4,588	21	9,534	192	2,226
78.76	" 3rd Feb. "	10,625	5,159	56,604	4,132	22	9,313	118	2,226
	Totals up to date ...	40,964	23,655	2,72,081	19,932	109	43,639	114	10,812
									4 0 8

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., K.-D., DACCA, AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic and Mileage for the week ended 9th February 1901, on 853 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (including ferry).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	250,840	Rs. A. P. 1,33,690 0 0	Mds. S. 11,55,380 0	Rs. A. P. 1,67,130 0 0	Rs. A. P. 9,000 0 0	Rs. A. P. 3,10,720 0 0	35,690	39,590	75,250
Or per mile of railway ...	294	157 0 0	1,354 0	196 0 0	1 0 0	354 0 0*	...	...	...
For previous 5 weeks of half-year ...	1,061,330	5,32,480 0 0	51,84,850 0	8,50,350 0 0	88,620 0 0	14,71,450 0 0	171,355	194,413	365,768
Total for 6 weeks ...	1,312,170	6,66,170 0 0	63,40,230 0	10,17,480 0 0	98,520 0 0	17,82,170 0 0	207,045	233,973	441,018
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	233,412	1,11,350 0 0	11,30,338 0	1,61,866 0 0	13,039 0 0	2,87,185 0 0	35,836	40,458	76,324
Per mile of railway corresponding week of previous year ...	290	134 0 0	1,369 0	195 0 0	1 0 0	330 0 0	...	...	...
Total for corresponding date of previous year ...	1,272,382	6,14,711 0 0	65,45,968 0	10,10,825 0 0	1,24,587 0 0	17,50,123 0 0	21,100	240,312	451,431

\* Excluding steamer earnings.

## DACCA STATE RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 9th February 1901, on 86 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	31,470	Rs. A. P. 8,710 0 0	Mds. S. 55,080 0	Rs. A. P. 5,520 0 0	Rs. A. P. 170 0 0	Rs. A. P. 14,400 0 0	Rs. A. P. 2,950	Rs. A. P. 2,530	Rs. A. P. 5,480
Or per mile of railway ...	366	101 0 0	640 0	64 0 0	2 0 0	167 0 0	...	...	...
For previous 5 weeks of half-year ...	120,980	Rs. A. P. 41,000 0 0	Mds. S. 272,280 0	Rs. A. P. 27,190 0 0	Rs. A. P. 1,010 0 0	Rs. A. P. 69,200 0 0	Rs. A. P. 13,260	Rs. A. P. 11,574	Rs. A. P. 34,834
Total for 6 weeks ...	152,450	Rs. A. P. 49,710 0 0	Mds. S. 327,960 0	Rs. A. P. 32,710 0 0	Rs. A. P. 1,180 0 0	Rs. A. P. 83,600 0 0	Rs. A. P. 16,210	Rs. A. P. 14,104	Rs. A. P. 30,314
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	25,699	Rs. A. P. 7,695 0 0	Mds. S. 19,666 0	Rs. A. P. 1,922 0 0	Rs. A. P. 45 0 0	Rs. A. P. 9,602 0 0	Rs. A. P. 2,878	Rs. A. P. 1,350	Rs. A. P. 4,258
Per mile of railway corresponding week of previous year ...	509	Rs. A. P. 80 0 0	Mds. S. 229 0	Rs. A. P. 22 0 0	Rs. A. P. 1 0 0	Rs. A. P. 112 0 0	Rs. A. P. 32 0 0	Rs. A. P. 12 0 0	Rs. A. P. 32 0 0
Total to corresponding date of previous year ...	140,416	Rs. A. P. 44,102 0 0	Mds. S. 174,100 0	Rs. A. P. 17,561 0 0	Rs. A. P. 2,466 0 0	Rs. A. P. 64,129 0 0	Rs. A. P. 17,113 0 0	Rs. A. P. 6,777 0 0	Rs. A. P. 23,890 0 0

## COOCH BEHAR STATE RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 9th February 1901, on 33.73 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings (including ferry).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	1,610	Rs. A. P. 660 0 0	Mds. S. 14,530 0	Rs. A. P. 760 0 0	Rs. A. P. 40 0 0	Rs. A. P. 1,460 0 0	Rs. A. P. 290	Rs. A. P. 1,200	Rs. A. P. (a) 1,580
Or per mile of railway ...	48	20 0 0	431 0	23 0 0	.....	42 0 0	.....	.....	.....
For previous 5 weeks of half-year ...	7,530	Rs. A. P. 3,270 0 0	Mds. S. 40,320 0	Rs. A. P. 3,580 0 0	Rs. A. P. 210 0 0	Rs. A. P. 7,060 0 0	Rs. A. P. 1,700	Rs. A. P. 6,170	Rs. A. P. 7,870
Total for 6 weeks ...	9,140	Rs. A. P. 3,930 0 0	Mds. S. 54,850 0	Rs. A. P. 4,340 0 0	Rs. A. P. 250 0 0	Rs. A. P. 8,530 0 0	Rs. A. P. 1,990	Rs. A. P. 7,460	Rs. A. P. 9,460
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	1,037	Rs. A. P. 881 0 0	Mds. S. 12,147 0	Rs. A. P. 605 0 0	Rs. A. P. 350 0 0	Rs. A. P. 1,536 0 0	Rs. A. P. 164	Rs. A. P. 962	Rs. A. P. 1,136
Per mile of railway corresponding week of previous year ...	58	27 0 0	366 0	18 0 0	6 0 0	51 0 0	.....	.....	.....
Total to corresponding date of previous year ...	9,823	Rs. A. P. 4,275 0 0	Mds. S. 71,084 0	Rs. A. P. 5,582 0 0	Rs. A. P. 1,145 0 0	Rs. A. P. 10,972 0 0	Rs. A. P. 1,081	Rs. A. P. 5,763	Rs. A. P. 6,848

\* Excluding coaching ferry.

(a) Includes ballast train miles 950.

## MYMENSINGH-JAGANNATHGANJ RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 9th February 1901, on 53.37 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	9,660	Rs. A. P. 2,350 0 0	Mds. S. 16,940 0	Rs. A. P. 920 0 0	Rs. A. P. 20 0 0	Rs. A. P. 1,390 0 0	Rs. A. P. 1,116	Rs. A. P. 500	Rs. A. P. 1,916*
Or per mile of railway ...	181	44 0 0	317 0	15 0 0	1 0 0	60 0 0	.....	.....	...
For previous 5 weeks of half-year ...	43,770	Rs. A. P. 10,850 0 0	Mds. S. 90,690 0	Rs. A. P. 4,350 0 0	Rs. A. P. 90 0 0	Rs. A. P. 15,090 0 0	Rs. A. P. 5,228	Rs. A. P. 2,694	Rs. A. P. 8,123
Total for 6 weeks ...	53,410	Rs. A. P. 13,000 0 0	Mds. S. 1,07,630 0	Rs. A. P. 5,170 0 0	Rs. A. P. 110 0 0	Rs. A. P. 18,280 0 0	Rs. A. P. 6,344	Rs. A. P. 3,694	Rs. A. P. 10,038
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	8,608	Rs. A. P. 2,123 0 0	Mds. S. 34,730 0	Rs. A. P. 1,074 0 0	Rs. A. P. 9 0 0	Rs. A. P. 4,106 0 0	Rs. A. P. 1,105	Rs. A. P. 577	Rs. A. P. 1,682
Per mile of railway corresponding week of previous year ...	161	40 0 0	651 0	37 0 0	.....	77 0 0	.....	.....	...
Total to corresponding date of previous year ...	47,312	Rs. A. P. 12,234 0 0	Mds. S. 1,34,822 0	Rs. A. P. 8,013 0 0	Rs. A. P. 77 0	Rs. A. P. 20,314 0 0	Rs. A. P. 5,916	Rs. A. P. 4,317	Rs. A. P. 10,233

\* Includes ballast train miles 432.

## BRAHMAPUTRA-SULTANPUR RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 9th February 1901, on 59 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	6,340	Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.	835	1,195	(a) 2,030
Or per mile of railway ...	107	1,800 0 0	19,340 0	1,740 0 0	20 0 0	3,560 0 0	.....	.....	.....
For previous 5 weeks of half-year ...	28,460	31 0 0	328 0	29 0 0	.....	60 0 0	.....	.....	.....
Total for 6 weeks ...	34,800	8,520 0 0	77,830 0	7,560 0 0	120 0 0	16,200 0 0	5,570	3,174	8,744
<b>COMPARISON.</b>							6,405	4,369	10,774
Total for corresponding week of previous year ...	2,532	712 0 0	41,919 0	949 0 0	4 0 0	1,665 0 0	177	1,495	1,672
Per mile of railway corresponding week of previous year ...	103	29 0 0	1,711 0	38 0 0	.....	67 0 0	.....	.....	.....
Total to corresponding date of previous year ...	15,290	4,648 0 0	1,73,017 0	6,332 0 0	54 0 0	11,034 0 0	984	5,890	6,874

(a) Includes ballast train miles 350.

## BENGAL CENTRAL RAILWAY COMPANY, "LIMITED."

Approximate Return of Traffic and Mileage for the week ended 2nd February 1901, on 139 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	34,443	Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.	4,567	2,708	7,275
Or per mile of railway ...	265	18,212 0 0	65,001 0	5,228 0 0	58 0 0	23,498 0 0	.....	.....	...
For previous 4 weeks of half-year ...	114,872	140 0 0*	468 0	38 0 0	.....	178 0 0	16,913	10,322	27,235
Total for 5 weeks ...	140,315	71,153 0 0	2,43,443 0	17,751 0 0	20,957 0 0	91,649 0 0	21,480	13,030	34,510
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	33,136	44,180 0 0	86,545 0	6,647 0 0	259 0 0	21,695 0 0	4,466	3,275	7,741
Per mile of railway corresponding week of previous year ...	255	109 0 0	623 0	48 0 0	2 0 0	159 0 0	.....	.....	...
Total to corresponding date of previous year ...	155,653	64,677 0 0	3,67,339 0	28,377 0 0	11,760 0 0	1,04,814 0 0	23,405	13,448	36,853

\* Coaching traffic calculated on 130 miles only.

## BENGAL CENTRAL RAILWAY COMPANY, "LIMITED."

Approximate Return of Traffic and Mileage for the week ended 9th February 1901, on 139 miles open.

	COACHING TRAFFIC.		MERCHANTISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	39,827	Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.	4,568	2,730	7,276
Or per mile of railway ...	306	16,616 0 0	69,429 0	6,149 0 0	77 0 0	22,842 0 0	.....	.....	.....
For previous 5 weeks of half-year ...	140,315	128 0 0*	499 0	44 0 0	1 0 0	173 0 0	21,480	13,030	34,510
Total for 6 weeks ...	189,142	71,153 0 0	308,444 0	2,979 0 0	21,015 0 0	1,15,147 0 0	21,480	15,738	41,786
<b>COMPARISON.</b>									
Total for corresponding week of previous year ...	41,090	15,140 0 0	70,557 0	6,598 0 0	349 0 0	22,296 0 0	4,692	2,566	7,258
Per mile of railway corresponding week of previous year ...	316	116 0 0	573 0	50 0 0	2 0 0	168 0 0	.....	.....	...
Total to corresponding date of previous year ...	196,743	70,827 0 0	446,916 0	3,275 0 0	12,009 0 0	1,27,111 0 0	28,097	16,014	44,111

\* Coaching traffic calculated on 130 miles only.

## SUPPLEMENT TO THE CALCUTTA GAZETTE, FEBRUARY 20, 1901.

## BENGAL AND NORTH-WESTERN RAILWAY.

Approximate Return of Traffic for the week ending 9th February 1901, on 1,223 miles open.

	COACHING TRAFFIC.		MERCHANTILE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boat.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week on 1,223 miles open ...	168,690	72,560	7,65,420	1,06,770	16,940	(a) 1,06,210 160 '48	31,691	(b) 30,602	68,293
Or per mile of railway ...	137 '93	59 '28	625 '55	87 '30			.....	.....	.....
For previous 4½ weeks of half-year ...	678,610	2,95,470	28,82,716	3,99,810	73,340	7,68,620	141,590	129,996	271,685
Total for 5½ weeks ...	847,300	3,67,970	36,48,130	5,06,580	90,250	9,64,830	173,281	160,597	333,878
COMPARISON.									
Total for corresponding week of previous year on 1,085 miles open ...	141,261	58,938	6,85,145	98,014	13,685	1,70,637	27,671	(c) 32,581	60,283
Per mile of corresponding week of previous year ...	130 '19	54 '32	631 '47	90 '33	12 '03	157 '27	.....	.....	.....
Total to corresponding date of previous year ...	737,305	3,06,236	37,27,946	5,07,980	86,624	9,00,740	161,905	178,651	340,726

(a) Increase due to increased mileage and improved traffic generally.

(b) Includes 1,024 miles of balast trains run on open line.

(c) " 9,250 " " "

## SEGOWLIE-RAKSAL BRANCH RAILWAY.

(WORKED BY THE B. &amp; N.-W. RAILWAY.)

Approximate Return of Traffic for the week ending 9th February 1901, on 18 miles open.

	COACHING TRAFFIC.		MERCHANTILE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the period on 18 miles open ...	1,386	319	14,449	467	17	823	334	120	504
Or per mile of railway ...	77 '00	17 '72	802 '72	27 '06	0 '94	45 '72	.....	.....	.....
For previous 4½ weeks of half-year ...	8,457	1,563	47,173	1,921	504	3,787	1,966	524	1,890
Total for 5½ weeks ...	9,843	1,881	61,622	2,408	321	4,610	1,750	644	2,394
COMPARISON.									
Total for corresponding week of previous year on 18 miles open	1,304	235	10,784	316	6	557	155	97	252
Per mile of corresponding week of previous year ...	72 '44	13 '04	599 '11	17 '55	0 '35	30 '94	.....	.....	...
Total to corresponding date of previous year ...	7,393	1,369	50,165	1,428	51	2,848	954	523	1,476

## ASSAM-BEJAL RAILWAY.

Approximate Return of Traffic for the week ended 2nd February 1901 on 397 miles open for all descriptions of traffic, and an additional 181 miles goods and parcels traffic only.

	COACHING TRAFFIC.		MERCHANTILE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	40,156	26,015 0 0	1,18,243	11,594 0 0	604 0 0	38,213 0 0	3,574	6,983	10,586
Or per mile of railway ...	101 '15	65 '53	204 '57	20 '06	1 '04	80 '53	9 '00	12 '08	21 '08
For previous 4½ weeks of half-year ...	120,623	75,730 0 0	7,68,482	54,517 0 0	4,443 0 0	1,34,639 0 0	13,037	30,515	43,602
Total for 5 weeks ...	160,549	1,01,754 0 0	8,80,725	66,111 0 0	5,047 0 0	1,72,912 0 0	16,681	37,497	54,158
COMPARISON.									
Total for corresponding week of previous year ...	27,053	19,133 0 0	1,61,348	10,840 0 0	445 0 0	30,418 0 0	3,674	6,307	9,981
Per mile of railway corresponding week of previous year ...	65 '33	45 '32	571 '77	24 '98	1 '03	74 '23	9 '28	14 '53	23 '81
Total to corresponding date of previous year ...	145,171	92,607 0 0	9,33,635	64,514 0 0	5,194 0 0	1,62,315 0 0	16,352	36,589	52,941

## FINANCIAL YEAR.

## Approximate Statement of Gross Receipts of the Assam-Bengal Railway.

RECEIPTS FOR WEEK ENDING 2ND FEBRUARY 1901.			RECEIPTS FOR WEEK ENDING 3RD FEBRUARY 1900.			TOTAL RECEIPTS FROM 1ST APRIL 1899 TO 2ND FEBRUARY 1901.			TOTAL RECEIPTS FROM 1ST APRIL 1899 TO 3RD FEBRUARY 1900.			Total increase in 1901.	Total decrease in 1901.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
578	Rs. 38,213	Rs. 86.63	434	Rs. 30,418	Rs. 74.33	578	Rs. 14,28,715	.....	434	Rs. 13,35,195	.....	Rs. 93,520	.....

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.	A.	P.
Approximate earnings for the week ending 9th February 1901	...	...	11,500 0 0
Audited earnings for the corresponding period of 1900	...	...	11,471 0 0
Increase	...	...	29 0 0
Receipts per mile for the week ending 9th February 1901	...	...	225 7 10
Ditto for the corresponding period of 1900	...	...	224 14 9
Increase	...	...	0 9 1
Receipts from 1st January to 9th February 1901	...	...	53,674 0 0
Ditto for the corresponding period of 1900	...	...	69,943 0 0
Decrease	...	...	16,269 0 0



# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, FEBRUARY 27, 1901.

## OFFICIAL PAPERS.

[*Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by post.*]

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### DISTRICT ROAD FUND.

No. 1216R.C.

GOVERNMENT OF BENGAL—PUBLIC WORKS DEPARTMENT.

ROAD CESS.

*Dated Calcutta, the 22nd February 1901.*

### RESOLUTION.

READ—

Letter from the Accountant-General, Bengal, No. 528L.F., dated the 17th January 1901, submitting an abstract of receipts and expenditure of the several District Road Committees in Bengal for the quarter ending 30th September 1900.

RESOLUTION.—The Lieutenant-Governor directs that the accounts of the receipts and expenditure of the several District Road Committees in Bengal for the second quarter of the year 1900-1901 be published in the *Calcutta Gazette* and circulated to the officers concerned.

ORDER.—Ordered that a copy of this Resolution, together with a copy of the abstract of receipts and expenditure, be published in the Supplement to the *Calcutta Gazette*.

Ordered also that a copy of this Resolution, and of the abstract referred to, be forwarded for information to the Commissioners of the Rajshahi, Chittagong, Bhagalpur, and Chota Nagpur Divisions; Superintending Engineer of the Northern Circle; Inspectors of Works, Eastern, Western and Bhagalpur Circles; and Financial Department of this Government.

By order of the Lieutenant-Governor of Bengal,

D. JOSCELYNE,  
*Secretary to the Government of Bengal.*

## SUPPLEMENT TO THE CALCUTTA GAZETTE, FEBRUARY 27, 1901.

## DISTRICT

## Statement of Receipts and Expenditure of the several District

## RECE

DISTRICT.	Balance in Treasury on 1st July 1900.	PROVINCIAL RATES.			Interest on arrears of road cess.	MISCELLANEOUS.			IRRIGATION.	CIVIL WORKS.		
		Cess on lands.	Cess on mines and railways.	Total.		Fees, fines and forfeitures.	Miscellaneous.	Total.		Canal tolls.	Miscellaneous.	Contribution from private persons.
1	2	3	4	5	6	7	8	9	10	11	12	13
<i>Cess districts.</i>												
Darjeeling Singhbhum	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.		Rs. A. P.
7,857 7 0	1,329 6 7	5 6 6	1,324 13 1	377 0 6	.....	3 12 0	3 12 0	3 12 0	.....	.....	.....	.....
3,564 8 7	46 0 6	331 0 0	377 0 6	.....	.....	879 12 6	879 12 6	879 12 6	.....	.....	.....	.....
Total	11,421 15 7	1,375 7 1	336 6 6	1,711 13 7	.....	883 8 6	882 14 6	882 14 6	.....	.....	.....	.....
<i>Non-cess districts.</i>												
Chittagong Hill Tracts	Rs. A. P.	.....	.....	.....	.....	16 0 0	224 4 9	224 4 9	.....	.....	.....	.....
Bonthal Parganas	84,201 1 6	.....	.....	.....	.....	1 0 0	.....	.....	.....	138 13 0	.....	55 4 0
Total	87,197 1 0	.....	.....	.....	.....	17 0 0	224 4 9	224 4 9	.....	138 13 0	.....	55 4 0
<b>GRAND TOTAL</b>	<b>98,619 0 7</b>	<b>1,375 7 1</b>	<b>336 6 6</b>	<b>1,711 13 7</b>	<b>.....</b>	<b>17 0 0</b>	<b>1,107 13 3</b>	<b>1,107 13 3</b>	<b>.....</b>	<b>138 13 0</b>	<b>.....</b>	<b>55 4 0</b>

## EXPEN

DISTRICT.	REFUNDS.		LAND REVENUE.	PROVINCIAL RATES.			INTER-EST.	ADMINISTRATION.		MEDICAL.	STATION-ERY.	MISCELLANEOUS.			
	Cess.	Other receipts.		Miscellaneous public improvements.	Establishment and contingencies of office of collection.	Revaluation establishment.		Interest on temporary loans.	Establishment and contingencies of Committee's Office.	Percentage cost of establishment for audit.		Total.	Expenditure during the prevalence of bubonic plague.	Printing at private presses.	Miscellaneous.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>Cess districts.</i>															
Darjeeling Singhbhum	.....	.....	.....	.....	414 14 3	414 14 3	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
6	.....	.....	6	.....	160 4 7	43 10 8	209 14 11	1,000	633 12 5	633 12 5	22 2 0	67 0 0	70 11 6	7 8 0	6 13 4
Total	4	...	4	.....	581 2 6	45 10 8	624 13 2	1,000	819 1 2	819 1 2	22 2 0	314 12 9	414 1 3	14 5 4	.....
<i>Non-cess districts.</i>															
Chittagong Hill Tracts	.....	.....	.....	.....	.....	.....	.....	31 0 0	31 0 0	31 0 0	14 9 0	.....	.....	9 15 0	.....
Bonthal Parganas	.....	.....	.....	542 1 2	.....	.....	.....	466 13 0	466 13 0	3 8 0	136 4 6	.....	.....	33 10 0	.....
Total	.....	.....	4	542 1 2	.....	.....	.....	497 13 0	497 13 0	3 8 0	150 13 6	.....	.....	73 9 0	.....
<b>GRAND TOTAL</b>	<b>4</b>	<b>.....</b>	<b>4</b>	<b>542 1 2</b>	<b>581 2 6</b>	<b>45 10 8</b>	<b>624 13 2</b>	<b>1,000</b>	<b>1,316 14 2</b>	<b>1,316 14 2</b>	<b>25 10 0</b>	<b>465 10 3</b>	<b>414 1 3</b>	<b>37 14 4</b>	

CALCUTTA:

The 3rd January 1901.

## ROAD FUND.

Road Committees for the quarter ending 30th September 1900.

PTS.

Total.	Grants from Government.	Advance.	Deposit.	Loan from Government.	Total receipts.	Balance of imprest in hands of Engineers and others, decreased.	Balance of unashed cheques, increased.	Total receipts, including balance.	Outlay.	Balance in Treasury on 30th September 1900.
14	15	16	17	18	19	20	21	22	23	24
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
.....	620 4 0	1,804 3 8	80 3 6	209 0 0	3,763 0 9	.....	347 11 0	11,968 2 9	7,209 12 3	4,754 6 6
.....	1,774 12 7	.....	.....	.....	3,320 13 1	.....	.....	6,885 5 8	6,125 5 4	760 0 4
.....	8,395 0 7	1,884 7 2	299 0 0	.....	7,083 13 10	.....	347 11 0	18,853 8 5	13,335 1 7	5,518 6 19
.....	9,500 0 0	.....	.....	.....	9,740 4 9	.....	.....	12,736 4 3	5,965 4 10	6,770 15 5
194 1 0	31,593 0 0	82 12 9	145 0 0	.....	12,016 13 9	.....	2,271 13 9	98,488 13 0	19,615 12 6	78,873 0 6
194 1 0	21,003 0 0	82 12 9	145 0 0	.....	21,756 2 6	.....	2,271 13 9	1,11,225 1 3	23,581 1 4	85,643 15 11
194 1 0	23,488 0 7	1,967 3 11	354 0 0	.....	28,840 0 4	.....	2,619 8 9	1,30,078 0 8	38,916 2 11	91,162 6 9

## PITURE.

Total.	Temporary loan.	PUBLIC WORKS.						Contri- bution from Local to Provin- cial.	Advance.	Deposit.	Total expenditure.	Balance of imprest in hands of Engineers and others, increased.	Balance of unashed cheques, decreased.	Total outlay.	
		Original works.	Repairs.	Establish- ment.	Petty establis- hment.	Tools and plant.	Total.								
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
28 3 6	827 12 5	712 7 5	1,809 5 9	264 13 3	.....	6 8 6	2,793 2 5	.....	1,373 13 3	.....	7,209 12 3	.....	.....	7,209 12 3	.....
320 3 1	.....	1,630 9 3	830 11 3	1,168 5 4	132 0 0	6 8 0	3,777 1 10	.....	1,350 0 0	.....	6,125 5 4	.....	.....	6,125 5 4	.....
428 6 7	827 12 5	9,352 0 8	2,640 1 0	1,433 2 7	132 0 0	13 0 0	6,570 4 5	.....	2,723 13 3	.....	13,335 1 7	.....	.....	13,335 1 7	.....
39 15 0	.....	.....	4,009 2 6	1,693 1 4	.....	37 9 0	5,829 12 10	.....	50 0 0	.....	5,965 4 10	.....	.....	5,965 4 10	.....
33 10 0	.....	600 0 3	7,392 13 2	4,682 13 2	108 14 0	454 1 11	13,537 11 0	275 9 7	3,420 3 3	1,200 0 0	10,615 12 6	.....	.....	10,615 12 6	.....
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J. C. E. BRANSON,

Accountant-General, Bengal.

**Report of the Committee appointed to inquire into the prospects of the cultivation of Sugar by indigo planters in Bihar.**

The Report of the Committee appointed to enquire into the prospects of the cultivation of sugar in Bihar is hereby published for general information. The Lieutenant-Governor defers his remarks on the Report, but offers at once to the gentlemen of the Committee his warm thanks for the quickness with which they have carried out the duty they undertook.

REVENUE DEPT.,  
The 26th February 1901.

F. A. SLACKE,  
Secretary to the Govt. of Bengal.

To—The Secretary to the Government of Bengal, Revenue Department.

SIR,

We have the honour to submit, for the consideration of His Honour the Lieutenant-Governor, the results of our inquiries into the question of the cultivation of sugar by the indigo planters of Bihar referred to us in the Resolution of the Government of Bengal, No. 2005 T.-R., dated the 8th October 1900.

2. We have visited the districts in Bihar in which indigo and sugar are now most extensively grown, and have had the advantage of personal conference with many planters and other gentlemen interested in and acquainted with the cultivation and manufacture of indigo and sugar. After carefully considering and collating all the facts and opinions thus obtained, and studying the facts connected with the sugar industry in other parts of the world, we see no reason to doubt that the cultivation of sugarcane and the manufacture of sugar therefrom may profitably be combined with the cultivation and manufacture of indigo in Bihar provided they are undertaken on business lines with strict regard to efficiency and economy. These two factors, we desire to say, involve the conduct of the business on a large scale, the employment of the best machinery and of skilled supervision, and this necessarily means the expenditure of large capital. The cultivation of the cane on the methods now employed, and the manufacture of raw sugar therefrom by the native methods, do not present any prospect of financial success to a European in competition with the native cultivator and manufacturer, and it would be unwise of planters to adopt such methods.

*Production in Bihar.*

3. In the four great indigo growing districts of Bihar north of the Ganges there are altogether, according to the official statistics, about 316,000 acres under indigo and 142,000 acres under sugarcane :

	Indigo Acres	Sugar Acres
Champanar	86,000	13,000
Saran	50,000	47,000
Muzaffarpur	90,000	8,800
Darbangha	90,000	73,200
	316,000	142,000

We are assured by the planters that there would be no difficulty in appropriating a fourth or a fifth of their *zirát* lands to the cultivation of the cane, and therefore it may be assumed that 60,000 acres could be added to the area now under cane. It may be taken that a ton of sugar is the ordinary yield to the acre at present and therefore the cultivation of this additional area would add about 60,000 tons of sugar to the quantity now produced in these districts, being an increase of about 42 per cent.

4. It has been suggested that such an increase would have the effect of over-supplying the market and of depressing prices to an unprofitable level. We do not share this anticipation which seems to us to be based upon a restricted view of the local market in Bihar. It is perfectly true that if indigo planters produced sugar largely and depended for their profits upon the sale of raw sugar in the bazars in the vicinity, competing in them with the native producer, prices would be so run down that the venture would soon be found too unprofitable to be repeated. The adoption of such a course, however, would be most inexpedient, and in our opinion the planter's sugar must not be placed on the market in the form of gúr, it must be refined in greater or less degree before it is sent out for sale, and the principal markets should be sought beyond the limits of Bihar.

*Trade and Consumption.*

5. At present the export of sugar from Bihar is very limited, the average of the five years ending 1899-1900 being—

	Refined	Unrefined
Imports, tons . . . . .	2,507	8,077
Exports, tons . . . . .	394	26,871

Apparently most of the production in Bihar is locally consumed, and there is not much margin for an addition to the quantity of unrefined sugar required by the local population, who also are generally poor. It seems clear, therefore, that the consumers of sugar manufactured by the indigo planters must be found, in the main, beyond the limits of Bihar. The market for sugar, refined more or less, is very large in India, for, apart from the production of the country, there has been an annual average importation of refined sugar from other countries in the four years ending 1899-1900 amounting to 170,235 tons, and in the first nine months of the present year the imports amount to 177,363 tons. The importation may be taken to amount on the average to about three times the quantity which the Bihar planters may be expected to produce for some years to come, and we see no reason to apprehend that if sugar is produced economically and efficiently in Bihar it will be unable to compete successfully with that portion of the imports at any rate which is consumed in Calcutta and other ports in the Bay of Bengal as well as in Northern India. Nor are the conditions unfavourable for the capture of remoter markets in and out of India. Besides the sugar which is imported there is also an importation into Calcutta from Mauritius of some 18,000 tons of molasses, most of which is, we are informed, used to mix with native tobacco. This article is entered on importation at a declared value of 2 rupees the hundredweight, but it is sold in the market at a price of 3 rupees the maund. There is consequently an extensive outlet not only for the sugar produced in Bihar, but also for the molasses.

6. Besides the imports we may take into account the proportion of the Indian production which is roughly refined for Indian consumption. According to the agricultural statistics there are approximately 2,800,000 acres under cane in India, but the statistics are imperfect by the omission of many Native States and of some large regions in British territory, and it will be well within the mark to say that there are three million acres under sugarcane in India, producing more than a ton to the acre on the average. If only one-tenth of this quantity is refined there are 300,000 tons of refined sugar required in the country in addition to the quantity imported, and most of the refining is done by rongh,

inefficient, and expensive processes the outcome of which cannot compete with sugar refined by modern and scientific methods and appliances. While it is evident therefore that for such sugar, whether imported or made in India, there is already a large market, the market is also an expanding one, for the population increases every year and there is certainly a constantly increasing tendency to prefer refined to unrefined sugar. A similar tendency has been manifested in other Asiatic countries whenever the people have had the opportunity given to them of purchasing refined sugar at a moderate price. For instance, in a Consular report recently issued on the trade of Nagasaki in 1899 we read, regarding the consumption of sugar: "It is in the higher grades that the increase in consumption may be most confidently expected. Formerly the Japanese preferred and indeed used solely unrefined sugar, but their taste has gradually changed and the use of that of higher grade is now universal throughout the Empire. \* \* \* Two large refineries have been established at Osaka and Tokio capable of turning out in the aggregate about eighty tons of refined sugar per diem, and both have financially been so eminently successful as to warmly encourage the continued development of this industry in Japan under prospects that every year are more and more brightening. At present the establishment of a third refinery on a large scale is being promoted at Wakamatsu." The change which has gradually taken place in Japan is also now taking place in India, and there is no room to doubt that the largest quantity of sugar that can be made by the planters in Bihar will find an expanding and profitable market beyond the limits of Bihar.

*Conditions in Bihar and cost of production.*

7. The existing conditions in Bihar seem to us to be encouraging even at present, and with improved methods most promising. The planters possess enough land, of suitable quality, to grow sufficient cane to produce 60,000 tons of sugar, and need not concern themselves to seek for land for the purpose or to depend upon native cultivators to supply them with the cane. Labour is extremely cheap, much cheaper than in any other part of India or the world; irrigation is not practised and is not necessary; almost all the factories are located within a short distance—on the average from five to seven miles—from the railway; every factory is provided with steam power and with water and also has carts and bullocks at its command sufficient to ensure cheap transit; the season for sowing the cane comes on before the time for sowing indigo, and the cane is not ready for the beginning of cutting operations until after the planter has made and sent away his indigo. As far as we can see, from the information furnished to us, the cost of cultivation at present is from 30 to 40 rupees the acre, including rent at 6 rupees an acre. The highest cost given to us does not exceed 50 rupees to the acre. The cost of manufacture of a ton of sugar (one ton sugar to the acre) is 16 rupees, and the cost of packing, freight, and other charges may be placed at 30 rupees. The total cost is therefore 96—or say 100—rupees for a ton of sugar which sells in the market at present at from R150 to R180 a ton, according to the degree of refining. These figures of cost, it should be noted, are the highest possible figures.

8. It has been objected that the planter who grows sugar will be the victim of theft from the canefields to an extent which will cause most or all of his profit to disappear, sugar offering a temptation to the dishonestly inclined person which is absent in the case of indigo. We have, however, satisfied ourselves, by inquiry from planters, that most of them are not inclined to regard the risk as serious and that they are confident of possessing the means of preventing

all but such petty theft as may be disregarded. Some planters expressed the opinion that it would be desirable that Government should legislate specially against such theft, but it seems to us that it is unnecessary to take this suggestion into consideration.

9. It has also been represented to us that the provisions of the Bengal Tenancy Act are so framed as to deter a planter from letting out his land to a cultivator for the cultivation of even one crop thereon, for such lease gives to the cultivator the power of claiming occupancy rights, and it has been suggested that provision should be made to enable a planter to let his land for a crop to a cultivator without incurring that risk, or—if this is considered inadmissible—to make a temporary exchange of lands to the advantage of both parties. We understand that no case in which occupancy rights have been claimed in such circumstances has as yet occurred, and we are not aware whether the apprehension expressed is sufficiently well founded to warrant serious consideration of the question by the Government; but as the matter was brought to our notice we mention it here.

10. We have said that the cultivation of the cane by the Bihar planter, even as at present conducted, offers a good prospect of profit, but it is necessary to observe that the methods of cultivation are susceptible of immense improvement and call for immediate reform. Indeed, nothing whatever has been done in Bihar to improve the cultivation either by rational treatment of the soil, by a rational manner of planting the canes, or by the introduction of improved varieties. Many planters now cultivate sugarcane on a small scale, feeding the cane to their cattle and occasionally making *gur* from surplus cane for disposal in the nearest bazar; but the cultivation has been conducted entirely according to native methods, without an attempt to prepare the soil on scientific principles or to grow improved varieties, and most of the cane therefore grown in Bihar has a thin and stunted appearance. Although the conclusions we have formed have been derived from the facts we have observed and ascertained in regard to the ordinary methods of cultivation with these unimproved descriptions of cane, we are confident that the profit to the planter must be materially enhanced by the careful cultivation of superior varieties.

*Methods of manufacture to be adopted.*

11. When the cane has been grown and cut, what is to be done with it?

At present, when a planter or a native cultivator crushes cane the crushing is effected in the well-known Beheea mill, set in motion by a bullock, which has so largely superseded the indigenous and still more primitive *kolhu*. The Beheea mill is a useful implement adapted to the needs of the very small cultivator, but its employment is quite out of the question when an extensive area has been grown by the planter. Worked by a bullock, and the canes fed into it singly by hand, the daily output is extremely small and the mill leaves much more juice in the cane than is left by a powerful mill worked by steam. The method of boiling the juice thus obtained, in an open pan over a fire lighted in a hole in the ground, is also primitive and inefficient in the highest degree. If a planter growing a hundred acres or more of cane were to use these implements he must certainly lose money, for his sugar would not compete with the sugar of the small cultivator made by similar methods, and it would be driven out of any market which could be entered by sugar made by better methods.

12. The answer to the question put in the preceding paragraph is suggested by the experience of most other countries in which sugar is grown and manufactured. In these it has been found that the best prospects of financial success are presented by the complete dissociation of cultivation and manufacture. The grower ceases to be concerned with the cane after it has been cut, and it is then removed to a central mill where it is crushed and made into sugar. In Queensland and New South Wales such mills are set up by a syndicate of farmers, or they are established by a large and powerful company which establishes also a central refinery or refineries to which the "grey sugar" produced in the mills is taken for conversion into the white sugar which alone is put on the market in those Colonies.

13. The arrangement in such a case may be briefly described as follows: The company arranges with a number of cultivators for the cultivation of a certain area with sugarcane and the purchase of the cane by the company. These cultivators grow the varieties of cane which are required by the company in the areas indicated by it, the varieties being selected by the company with reference to the conditions of soil and climate, the juice-giving properties of the cane, and especially the time at which each variety comes to maturity, some being much earlier than others. By this means the company is able to secure that the mill is fed in regular succession from day to day with an adequate quantity of cane cut at precisely the right moment, and the season is prolonged over half the year or more. When the time arrives for cane-cutting trucks, specially constructed for the carriage of the canes, are run on the railway line to the point nearest the field to be cut, and from that point they are taken to the field on a portable railway line, by men, horses, or oxen. The trucks are filled and brought back to the railway line, and the cane conveyed to the crushing mill. For the use of this portable line the cultivators are charged a moderate rate of hire by the company. The field being cleared the portable line is taken up and relaid at the next field to be cut, and the process is repeated until all the cane has been cut in the area which supplies the mill with its raw material. The size of the mills is regulated by the cane-growing area of the district whence the raw material is brought to be crushed and the maximum distance over which the cane must be transported. Sometimes cane is two days on the railway before it reaches the mill, but this is the longest period that can be permitted to pass between cutting and crushing.

In these mills, which are furnished with the best machinery and apparatus, the canes are effectively treated to obtain from them all the juice obtainable, and the juice is made into dry grey sugar all of which is sent to a central refinery for conversion into white sugar. The relations of the manufacturing company with the cultivators extend further than the contractual engagement to grow and buy sugar, for the company finances the grower with working advances.

14. An arrangement of this kind is distinctly the best that could be made in Bihar, so far as it may be feasible. There are, however, two considerations which may operate against its adoption. The first of these is the doubt whether in the climate of Bihar, especially in the warmer periods at the beginning and ending of the cutting season, the cane would not begin to deteriorate if it is kept for more than a day after cutting. This point can only be determined by actual experience. The second consideration is that the establishment of mills such as those to which reference has been made, in the numbers which would

be required to treat the 600,000 tons of cane that the Bihar planters will be in a position to produce, involves the raising of very large capital for initial cost and working expenses. Of course any operations of this kind must be gradual and tentative, and a company might be formed in association with the syndicated planters of a selected district for the establishment of one or two such mills capable of producing one thousand tons of sugar in the season. For such mills convenient sites would be found at Sakri, Muzaffarpur, Bettiah, and Chupra.

15. There must, however, necessarily be some delay in the formation of a company or companies possessing such large capital and working resources as are implied in the establishment of works of this class, and it is expedient to consider whether it would be feasible to begin the business with an alternative system not requiring so much organisation and capital though it would permit planters to place on the market at profitable rates a class of sugar for which there is an extensive and constant demand.

16. It seems likely, judging from the results of experiments which have just been undertaken at Begumserai by Mr. Hancock on behalf of Messrs. Gillanders Arbuthnot & Co., that such an alternative method exists in the establishment, at each indigo factory where sugar is grown on an area of about 200 acres, of a cane-crushing machine, furnished with the necessary evaporating pans and centrifugal. We have ascertained that such a machine can be set up for R5,325, including the price which is R5,075. The working cost of the machine—including fuel, stores, labour, and all charges with depreciation on capital cost at 6 per cent—is not more than R16 daily. The machine turns out two tons of dry (muscovado) sugar in a working day of 12 hours, with 35 gallons (equal to 510 lbs.) of molasses. This machine, as observed above, is capable of treating the cane from 200 acres, but larger machines capable of dealing with more extensive areas can be obtained at a comparatively small increase of cost.

17. Here it will be remarked that we suggest the association of cultivation and manufacture, although in a preceding paragraph the opinion was expressed that the two operations should be dissociated. Certainly the most efficient way of carrying on the industry lies in the conduct of the two processes by separate agencies, for ordinarily the grower has neither the skill, nor the capital, nor the area of land under cane, which are required for the economical conduct of a crushing mill. The Bihar planter, however, stands on a relatively high plane as a grower of agricultural products. He generally possesses a wide area of land; he has under him an army of work people and labourers and is accustomed to organisation and discipline; he is—or was before the recent heavy fall in the price of indigo—in a position to command the advance of considerable sums for working capital; he possesses steam-engines and these are set free from the requirements of indigo manufacture in good time to be utilised to drive the cane-crushing machinery which can be connected with the engines; he has at hand the workshop appliances requisite for repairs in case of accident; at Muzaffarpur he can command skilled engineering aid if it is wanted for more serious cases; he possesses an abundant water-supply; he has extensive storage accommodation for sugar in the indigo houses which are emptied of the indigo before sugar manufacture begins; and, finally, he can sell the grey sugar in a market in which there is still a more extensive demand for that article than for white sugar.

Consequently, in view of all the conditions, it seems to us that pending the completion of the more perfect organisation which is needful if the utmost economy and efficiency are to be secured, planters may with confidence set up such machines as the one tested at Begumserai and expect that their outturn will be sold at a profit which will satisfy them.

*Organization of market agencies.*

18. Here, however, the consideration of the market again presents itself. When the cultivation and manufacture are dissociated the grower's market is ready to hand in the manufacturing company: when they are combined, as in the case just discussed, the grower must find his market, and here complete and careful organisation is necessary. It may be said that the market will be found in Calcutta by those mercantile agencies in whose hands the planters' indigo is concentrated before distribution. But the cases are not analogous. The indigo is sent to Calcutta as the port of shipment to other countries, whereas most of the sugar produced in Bihar will be consumed in India. Now if the arrangements for the finding of a market are concentrated in Calcutta the sugar grower will not be able to take advantage of the internal markets in Northern India, for his sugar cannot successfully compete, after payment of the cost of transit to Calcutta and back again, either with imported sugar on which only the cost of transit one way is paid, or with locally made sugar. The market for grey sugar in Calcutta moreover is not so important as it is in places more remote from the sea and less easily supplied with white sugar. The conclusion to which these considerations point is that it is necessary for the growers to organise a buying and distributing agency in the area of production. Such an agency or agencies might conveniently be located at Somastipur or Mokameh. It would be desirable that the agencies should be in a position to work with the planters for sugar in the manner in which the Calcutta firms work with them for indigo and indeed the agencies might be conducted by those firms. Possibly in course of time they would find it advantageous to develop into manufacturing companies like those to which we have referred.

We wish to say here that we lay particular stress upon this question of the organisation of a complete and efficient market agency for the purchase, sale, and distribution of the sugar made by the planters, for without such agency the extensive growth of cane by the planters must end in disappointment and pecuniary loss.

*Failure of former attempts at Sugar-growing in Bihar.*

19. It will naturally be asked what is the reason that former attempts at sugar manufacture in Bihar have failed if the prospects at present are so encouraging. The answer is on the surface: conditions were radically different in the days—the last decade of the first half of the century—when a sudden mania for the growth and manufacture of sugar took possession of the Bihar planters. Much of the machinery ordered out in haste was found unsuitable; the persons who were to work it did not know their business; there were no means of repairing broken machines; some parts of the machinery were lost in the long and laborious transit up the river which then formed practically the only means of communication; the sugar made was of a class for which at that time there was no demand in the country and all of it was sent down in boats to Calcutta, suffering heavily from wastage by theft and leakage in ill-found boats, while there was not infrequently complete loss of boat and cargo.

When the sugar, or what was left of it, finally reached its destination, after a very long journey during which interest and other charges were accumulating, it could not find a profitable market in competition with sugar produced much nearer the market and more cheaply. Further, just as the industry was started there occurred the failure of the Union Bank which shook the Indian mercantile world, and the planter found that it was hopeless to obtain funds to any extent even for the prosecution of a well established industry much less for one that was new, one which short experience had already shown to have been started on a wrong basis, and one which could not in existing conditions hope to succeed. All the conditions are now radically different: it is easy to import machinery into any part of Bihar rapidly and safely, and the means exist of keeping it in order and of securing the services of persons capable of working it to the most advantage, while all the factories are located conveniently to railways which can move their sugar cheaply, quickly, and safely to Calcutta or any internal market, and there is a large and growing demand in India for sugars such as the planters will make. The old conditions therefore present a contrast, not a precedent.

20. It will doubtless also be asked how it is that even in the present day the refinery established at Sakri, in the Darbhanga district, has not been a success. The answer is obvious to those who knew the circumstances. If this refinery had been started with a block value of only £20,000 or £25,000, instead of the £50,000 which it actually cost in consequence of the original proprietors not having conducted their operations on business principles, if the waste of capital on plant and machinery had not left the proprietors without funds to pay for working charges, and if the establishment had been worked all along under competent management, it would have been working at a profit now. It could now be set to work again at a good profit if the capital account were reduced to its proper value, and it was managed on the lines of a business concern.

*State aid to planters.*

21. In the course of our conversations with the many gentlemen who have spoken to us on the subject of this report, it has frequently been suggested that the Government might give the planters financial assistance towards the cultivation and manufacture of sugar. It seems clear, however, from the terms of the Resolution of the Government of Bengal in which this inquiry was ordered that the Government do not propose to offer financial aid to individual planters, but desire to limit their intervention to ascertaining through an independent Committee whether the cultivation and manufacture of sugar offer a sufficiently attractive prospect to induce capitalists to invest their money in the venture. We venture to think that the decision of the Government on this point is sound. If planters are in a position to offer security for advances of capital they will not fail to obtain in the market the funds they require at a reasonable rate; if they are not in a position to offer security the public money should not be lent. It has been suggested that Government might guarantee advances from banks to planters, but it is obvious that such a course would not be considered necessary by a bank if sufficient security were offered, while any bank would lend as much as was required on the Government guarantee without asking for any other security, and when the time for repayment arrived the bank would look to the Government and leave to them the odium and trouble of endeavouring to realise from the planter.

It is true that in Queensland the Colonial Government on the application

of a syndicate of sugar-growers advances the money required for the establishment of a sugar-mill, but the conditions are not such as to make this arrangement a precedent to be followed in India. There the Government are desirous of attracting settlers to unpeopled land by aiding them to pursue profitably the agricultural industry for which the land is best suited, and to introduce at the same time a new manufacturing industry. In India the cultivation of sugarcane is not new; it is very extensive, and if the Government aid the planters to grow the cane, they cannot refuse similarly to aid all native cultivators engaged in the same pursuit, especially as it must be anticipated that the efficient methods employed by the planters must displace sugar produced by the inefficient native methods. Moreover, the Government will not be able to discriminate between men who may be trusted to do well with the assistance given them and men on whom assistance is thrown away. Further, if the Government were to aid the cultivation and manufacture of sugar, there would be no justification for refusing financial help to persons engaged in other agricultural industries where the product of field labour needs to be manufactured before it can be brought into use—for instance, cotton, jute, oilseeds, tea. No assistance in such cases would be useful unless it was given on an extensive scale, and the funds at the disposal of Government are entirely inadequate for such purposes. Finally, if the Government were to make advances on easy terms to planters and others, an artificial stimulus would be given to the production of a particular article which must of necessity end in a fall of prices financial waste, and the loss of the money advanced by Government. From information communicated to us we are led to believe that—as was natural to anticipate—the mills in Queensland established on the basis of Government money have not been such a financial success as to commend the system for imitation in India, while the mills set up by private capital and directed by skilled enterprise are returning good profits.

22. There are, however, two ways in which Government assistance could be given to planters in an unobjectionable and useful way. One of these methods lies in the direction of systematic and co-ordinated experiments in cultivation. There are at present two experimental stations in Bihar—one under the control of the Bihar Planters' Association located near Muzaffarpur and managed by Mr. Rawson, the other at Dulsingserai under the control of a syndicate of Calcutta merchants and managed by Mr. Hancock. At each of these stations experiments are being made, quite independently of the other, in the cultivation of indigo and other crops, and the results achieved in each are carefully guarded from the knowledge of all but the contributors. Such experiments, however, should be made generally available to the whole planting community, and they should be worked as part of one system if the full benefit of such work is to be obtained. Experiments of this kind are of the greatest use, and indeed it is stated that already material improvements have been introduced into the cultivation and manufacture of indigo, increasing the quantity and improving the quality without a corresponding increase in cost. Agricultural experiments must proceed continuously over a long series of years before definite and really valuable results can be secured, and it is possible that private individuals, associations, or syndicates may be disinclined after a time to defray the cost of continuing them when much of the accumulated experience is withheld. It would be an advantage then if

such experiments were conducted by Government and the results obtained made accessible at frequent intervals by means of leaflets or bulletins to the persons interested. The experts conducting the experiments should also be allowed to visit indigo factories for the purpose of giving personal advice on the spot with regard to experiments locally undertaken. Such a form of aid by the State is eminently suitable and proper in an agricultural country where the planters, themselves agriculturists on a large scale, will profit by the instruction received, and form a centre whence improvements will spread amongst the smaller agriculturists by whom they are surrounded, so far as the improvements are within the means of the people.

Such a station would be excellently located at Poosa, which, we understand, is now again in the possession of Government. This place is well adapted in every respect for the establishment of an important and well equipped agricultural station for Bihar and capable of extending the sphere of its influence westward into the adjacent districts of the North-Western Provinces and east and south in Bengal. If the station is established the staff should be fully adequate to secure continuity in the experiments undertaken, both in the field and in the laboratory.

23. It is worth mentioning here that the Hawaiian Sugar Planters' Association possess such experimental stations and laboratories, and that the Director and Chief Chemist in charge of those stations, Professor Walter Maxwell, was employed by the Queensland Government to report on the sugar industry in that Colony. In his "Report upon an investigation into the condition of the sugar industry in Queensland," dated the 30th January 1900, he recommended the establishment of three experimental stations, and his description of the staff required and its function and duties may well be reproduced here—

A director shall be appointed who shall establish the said stations, appoint and locate an assistant director upon each station, and engage chemists for all laboratory requirements.

The functions of the director, after the establishment of the said stations, shall be as follows:—

- (1) To personally visit all districts and sub-districts where cane is grown, and to inspect the farms and plantations of the growers; advising in all matters of the field, such as selection of lands suitable, and leaving out of lands unsuitable, for cane; the individual acts of cultivation; the resting and rotating of the soils with other crops; the introduction of other economic crops and sources of profit; and the instituting of new means for the restoring and maintaining of the producing power of the lands.
- (2) To examine the soils in the field, and take samples for analysis in laboratories, and to advise manures according to the ascertained requirements of each soil and location.
- (3) To inspect the mills during the crushing season, advising and aiding the manager in the several acts of the manufacture.
- (4) To institute experiments at each of the three stations along the several lines of cultivation, planting, manuring, irrigating, and study of cane varieties; and likewise to study prevailing diseases and pests.
- (5) To advise and aid the cane-growers and manufacturers on questions of sale and purchase of cane, and to be at the service of the Association in its affairs which are connected with the State.
- (6) To train and prepare the assistant directors, in order that they shall ultimately become fitted for the responsible direction of the respective stations. The term of requirement of the services of the director in chief should not exceed five years.

To embody and execute the functions as set forth, it is seen that the director must, of necessity, be a thorough agriculturist, a highly trained scientist, and conversant with all questions of the field and mill. His practical experience and technical knowledge must be such as to secure the absolute confidence of the cane-growers and the mill officials, whilst his tact and business capacity must be to hand in all practical situations.

The selection of the director will be the most important act of the association. His fitness for the position must be absolutely certain; then he must be given full responsibility and discretion. And his responsibilities will be varied and heavy; for he must not only talk with and advise the farmers in the fields and the managers in the mills, but he must appoint the work of the chemists in the analysis of soils, and control inspections of manures and know that they are accurately carried out; and he must advise the composition of the manures to be used, and know where the manures can be most economically obtained. In brief, the absolute direction of the experimental work that we are advising will be in his hands, and its success will rest wholly with him. He, therefore, must be a man of the fullest and most unquestioned fitness for the position. Unless such a man is found and entrusted with the work, we cannot accept the responsibility for the adoption of the remainder of our recommendations.

With the institution of such a system of scientific and practical experimentation as we have set forth, the direct advising and instructing of the growers and manufacturers along new and tried lines would begin. Upon these would follow the accurately ascertained results of the experiments at the stations, which results would serve as guides and as actual examples, showing what could be done on a larger scale. By these means would be set in movement the influence of new ideas and the knowledge of new methods and their results until gradually but surely a new system and order of things will have taken root in the whole field of sugar production throughout the colony.

Now appears to be the time to put this new work into operation. We have seen the lands and conditions of the sugar-growing areas, and are fully persuaded of their native capability to produce; but we have also noticed the exhausted state of the soils and their demand for restoration and help.

The last paragraph quoted above applies as appropriately to Bihar as to Queensland. And we may observe here that the suggestion we make is similar to the recommendation made in analogous conditions by the West India Royal Commission in their report written in August 1897.

24. The other method in which Government might assist planters is in the provision of railway communication by sidings or portable lines between factories and the main line of the railway system. This recommendation is also in accordance with one made by the West India Royal Commission.

#### *Cultivation of Oilseeds.*

25. In the course of our work we inquired whether there were other products which might advantageously be grown by indigo-planters. We found that several of them were already cultivating various products (such as turmeric, ginger, chillies), chief among them being oilseeds, especially *sarson* (rapeseed). These seeds are easily cultivated, and we were enabled to note at Dulsingserai how greatly the yield has increased with the judicious application of suitable manure. If the planters could grow them and express the oil the cultivation has everything in its favour, for the oilcake would be most useful in manuring the sugarcane lands and for cattle-feed. But here also careful organisation of a market is all-important. The oil must be made efficiently and economically, a certain standard must be worked up to and maintained so that the oil may be known by its name and mark, and the market must be found as in the case of indigo and sugar. Some planters now make oil in a rough way and sell it readily, but they should not assume that they can continue to do so if the cultivation should largely increase.

*Prospects of Indigo.*

26. Our attention was also directed to the condition and prospects of indigo, for if it seemed probable that indigo would be restored to the position which it held until recently, it would be idle to anticipate any extensive resort to sugar cultivation by indigo-planters and therefore equally idle to expect that capital would be forthcoming for investment in cane-crushing and sugar-manufacturing machinery. We found that the two Associations mentioned in paragraph 22 of this report had done and are doing useful work in increasing the quantity of indigo plant yielded to the acre and the quantity of dye yielded by the leaf in the vat. Such an increase enables the planter to sell his indigo with a profit at a price which would have been unprofitable under antecedent conditions. Nevertheless, it must be recognised that, in face of the increasing competition of synthetic indigo, an increase in the quantity of indigo produced in Bihar must of necessity tend to lower prices below the present low level. On the other hand, it is possible, and indeed probable, that as synthetic indigo becomes better known to consumers and the means of producing it expand, it will be produced on an increasing scale and at a diminishing level of price. Again, the present level of price for natural indigo may continue to be profitable while the planter has a full crop, but recent experience precludes us from anticipating an increase in price when crops are bad, and indigo is notoriously a precarious crop. Therefore, without taking too pessimistic a view of the future of indigo, it is reasonable to anticipate that the competition of synthetic indigo will prevent any future increase in the price of vegetable indigo, that it will soonest and most injuriously affect the finest and most expensive indigo which is that of Bihar, and cause a further reduction in price which would hardly clear the planter in a good season, while a bad season would be ruinous to him. In the end, though we trust the end is a long way off, the competition of synthetic indigo may bring about the supersession of vegetable indigo as the competition of alizarine dyes ended in the supersession of madder. However this may be, it is obviously expedient that indigo-planters should possess in sugar and other products resources which, if they are carefully and intelligently utilised, will enable them to contemplate the future of indigo with equanimity.

*Summary.*

27. Our conclusions may conveniently be summarised as follows:—

- (1) Even as now conducted the cultivation of sugar by planters is profitable, and it will be still more profitable if conducted in accordance with the principles of modern scientific agriculture, and it is very necessary that the cane should be so cultivated;
- (2) the methods of manufacture in use by native cultivators and refiners cannot be applied to the cane produced on a large scale by European planters;
- (3) it will be best and most economical to adopt the system of central mills and refineries;
- (4) but, if capital cannot be raised at present for the introduction of that system, planters should crush the cane grown by themselves in mills worked by steam and furnish with apparatus for the manufacture of grey sugar;

- (5) the organisation of the market for the sugar produced is a consideration of primary importance, and arrangements for the supply of a wide range of markets should be made as soon as the movement for the cultivation of sugarcane extends;
- (6) there is room for great improvement in the varieties of cane grown in Bihar, and the planters stand in need of careful and systematic instruction in the cultivation of the cane;
- (7) such instruction can best be imparted from an agricultural station maintained by the State under the charge of a competent director and chemist and adequately equipped and manned;
- (8) such an institution would primarily give instruction in the important crops of indigo and sugar, but experiments should be made also in all other crops cultivated or capable of being cultivated in Bihar by European or native agriculturists, for the instruction given would be as useful to the native cultivator as to the European planter;
- (9) the future of indigo is precarious, and it is desirable that no time should be lost in growing other saleable crops which will partially take its place, amongst these being sugar and oilseeds.

28. Appended to this report are some papers which are interesting and useful as presenting the conditions under which the cultivation and manufacture of sugar are carried on in some countries where the industry has attained important dimensions. The papers also include some by representative Bihar planters containing their opinions on the prospects there. We should observe that the paper by Mr. Moreland, Director of Land Records and Agriculture in the North-Western Provinces and Oudh, is inapplicable to the conditions existing in Bihar, but it is useful because it sets forth impressively and emphatically the need of skill and care in the conduct of the industry.

We have the honour to be,

Sir,

Your most obedient servants,

J. E. O'CONOR.

D. M. HAMILTON.

E. A. HANCOCK.

*Calcutta, February 16, 1901.*

## APPENDICES

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No. 1—Notes on Sugar growing in Bihar, by Mr. Rowland Hudson, of Ottur, dated January 1900 . . . . .

No. 2—Memorandum on Sugar growing, by Mr. H. Collingridge, of Daudpur, dated February 14, 1900 . . . . .

No. 3—Memorandum on Sugar Cultivation and Manufacture in Shahabad, by Mr. Ernest Mylne, of Beheea . . . . .

No. 4—Note on Sugar Cultivation by Mr. W. H. Moreland, I. C. S., Director of Land Records and Agriculture, N.-W. P. and Oudh . . . . .

No. 5—Sugar Cultivation in Queensland, by Mr. A. F. Walker, of Brisbane . . . . .

No. 6—Notes on Sugar Cultivation in the Straits, by Mr. Jules Martin of Messrs. Hüttenbach Liebert & Co., Penang . . . . .

No. 7—Notes on Sugar Cultivation in Mauritius, by Messrs. Scott & Co., of Port Louis . . . . .

No. 8—The Sugar Industry in the North-Coast District, by J. A. Despeissis. —(*From the Agricultural Gazette of New South Wales, January 1891*) . . . . .

## [ Appendix No. I ]

*Notes on Sugar growing in Bihar by Mr. Rowland Hudson, of Ottur, dated January 1900.*

*Soil.*—Tirhoot has been called the garden of India. The soil of Tirhoot, Champaran, and Chapra, the three principal indigo growing districts in Bihar, is admittedly the most fertile in India, and perhaps in the world. Many years ago European settlers fixed on Bihar, especially Tirhoot, for their cane growing and sugar making operations. The soil is good, the district thickly populated, labour extremely cheap, and the local consumption of sugar heavy. The trade was eventually abandoned by Europeans in these districts, owing to the difficulty and expense of transport, and of obtaining efficient pressing machinery. It was about that time that indigo became a most paying industry, and large tracts of land which had until then been under sugarcane, were converted into indigo cultivation. Since then, great changes have taken place. Several lines of railway run through Bihar, connecting it with the main line running between Calcutta and Bombay. Pressing machinery has been so improved that an increase of over 30 per cent of yield can now be obtained from the cane, and recently a countervailing duty of Rs 1 per maund (about £1-10-0 per ton) has been imposed on all bounty-fed imported sugar.

*Canes.*—The description of cane grown by the European planters for sugar has been allowed to practically die out in Bihar. It contained a much larger percentage of sugar than the ordinary cane still in use, but was of so much larger diameter, and consequently so much more difficult to press, that the natives, who still carry on the industry of growing and pressing canes, were unable to work it in their primitive pressing mills worked by hand or bullock power. I believe this cane is still grown in some parts of India. *Vide Agricultural Ledger 1898, No. 8*, from which I attach extract (marked B). I have written to Dr. Leather for all information about this cane, and enclose copy (marked A), of his reply dated 13th January 1900. It is possible that the cane which grows from seed in Barbadoes and other West Indian islands, would be the most suitable description to import and try in this country. I have just procured a sample of cane thicker than the ordinary cane, but which grows to a height of 15 feet. I am planting small plots of both canes to see which does best. The extra long variety was grown in Burdwan (Lower Bengal).

*Yield.*—After most careful inquiries in several localities, and from experiments that I have made myself, I find that the ordinary cane grown on one acre of unmanured land weighs 15 tons. This yields about 1½ tons of sukkur (unrefined sugar) and about ½ ton of molasses. The rates quoted by the manager of Sakri sugar refinery, at which he is ready to purchase the above produce, are as follows:—

	L s. d.
Sukkur 1½ ton	13 6 8
Molasses ½ ton	1 0 0
<b>TOTAL</b>	<b>14 6 8</b>

The rent of land and cost of cultivation of one acre of cane, and conversion of the produce into sukkur and molasses, would amount to about £3.

The gross profit on one acre of cane would therefore be £11 6s. 8d., as per the following estimate:—

	R a. p.
Cultivation charges—	
Rent of land . . . . .	5 0 0
Tillage . . . . .	3 0 0
Seed cane . . . . .	8 0 0
Cutting and planting seed cane . . . . .	1 0 0
Supervision . . . . .	4 0 0
	21 0 0
Manufacturing charges—	
Cutting canes . . . . .	1 8 0
Carting to factory . . . . .	4 0 0
Coal . . . . .	6 0 0
Skilled and unskilled labour . . . . .	6 0 0
Supervision . . . . .	4 0 0
Miscellaneous expenses . . . . .	1 0 0
	22 8 0
Total cost of cultivation and manufacture of one acre of sugarcane . . . . .	43 8 0 = £3 0 0
Value of 1½ ton of sukkur . . . . .	£13 6 8
Do. of ½ ton of molasses . . . . .	£ 1 0 0
	£14 6 8
Profit . . . . .	£11 6 8

Two crops of cane are obtained from one sowing, and the period which each crop takes in growing is about one year. The second crop does not give as good a yield as the first. The figures quoted above refer to the expenses and yield of one year only. After the second year's crop is cut, it is advisable to put the land under some other crops for at least two years. I have found from experience, during my management of the Prossa indigo concern, where cane is largely grown by natives, that indigo does exceedingly well on land that has been under sugarcane. The roots of sugarcane only penetrate to a depth of from eight to twelve inches. The tap roots of indigo go down several feet. As soon as sugarcane reaches a height of about three feet it kills weeds of all descriptions. Thus the land is not exhausted by weeds, whereas in the case of almost every other crop it is well nigh impossible to keep them down by the most careful weeding.

*Adaptability of indigo estates to the cultivation of cane and manufacture of sukkur and molasses.*—Indigo is sown in March and manufactured during July, August, and September. Cane is planted or sown in February, and manufactured during January, February, March and part of April, in the following year. The buildings, boilers, engines, etc., of indigo factories could therefore be utilized for the manufacture of both crops. The cost of cane pressing machinery, boilers suitable for boiling the sugarcane juice, and centrifugals for making sukkur, would be roughly about £2,000, for a cane cultivation of 1,000 acres. The lands at present under indigo are, in most cases, suitable for sugar. It is therefore obvious that a system of changing the land from one crop to the other would work simply and economically, and with advantage to both. The cane crop would all be cut by about the 10th April. The land

could be manured with the refuse indigo plant (most excellent manure) and allowed to lie fallow till the following March, or, if considered advisable, let out to natives for an autumn crop at a rent which would more than cover the cost of manuring. This crop would be harvested in September and October and the land prepared for the sowing of indigo in the following March. The above remarks refer to lands in possession of indigo factories. Natives who hold lands and possess occupancy rights on indigo estates contract to grow indigo at fixed rates. I am assured on all sides by them that they would be equally willing to contract to grow cane for the same rates as we pay for indigo, which would be very little in excess of what it would cost to cultivate cane in lands in our own possession. It is possible that the European and native staff at present employed for the cultivation and manufacture of indigo would, with a few additional hands, be capable of superintending the operations of both industries, and thus a considerable saving could be effected in the yearly outlay.

The great difficulty which the refiners appear to have to contend with is that the manufacture of the raw material must be completed between the months of December and April, and a sufficient quantity cannot be bought and stored at the refinery to keep it working during the whole year. This difficulty could be overcome by storing the raw material at the indigo factories, where there is ample room, and forwarding it to the refinery as required. The freight per maund of sukkur per mile by rail is one-fourth of a pie, which is equivalent to about one half penny per ton per mile. Carting expenses would come to about one penny per ton per mile.

	£ s. d.	£ s. d.
Price of $1\frac{1}{2}$ ton of sukkur . . . .	13 6 8	
" of $\frac{1}{2}$ " of molasses . . . .	1 0 0	
Cost of refining 1 ton of sukkur as per Mr. J. C. Aguilar's figures appended (marked F)	0 19 0	
Cost of distilling 74 gallons of rum, produce of 1 ton of molasses . . . .	2 13 4	
 TOTAL . . . .	 17 19 0	
 Value of 1 ton of refined sugar obtained from $1\frac{1}{2}$ ton of sukkur . . . .	15 0 0	
Value of 74 gallons of rum . . . .	5 0 0	
 Total value of refined produce of one acre .	 20 0 0	
Refinery profit on produce of one acre . . . .	2 1 0	

From the foregoing figures it is obvious that the growing of cane, and manufacture of sukkur and molasses, is a more paying business than the refining and distilling of sukkur and molasses into pure sugar and rum. Each industry, properly worked, would pay good dividends on the necessary capital, but the combination of both would pay better than either *separately* for the following reasons: At present the market for the raw material is uncertain, and the supply of the same for the refinery is equally uncertain. The middleman who buys from the producer and sells to the refinery absorbs a profit of from 10 per cent to 20 per cent on his transactions. By combining the two industries, these three drawbacks would disappear. At present, owners of

refineries do not possess any land, and never attempt to grow cane. Some of them whom I have met were absolutely ignorant of the fact that there is more money to be made out of the growing of the cane and manufacture of the raw material than from the refining of the latter.

*General aspect of the trade.*—The growing of sugarcane in Bihar has for many years been in the hands of natives. They are behind the times. The quality of cane grown is not the best obtainable, the selection and cultivation of the land is very imperfectly done, and they lose at least 30 per cent of the yield for want of up-to-date pressing machinery. Refining is carried on by them with their old and primitive methods, and the quality of the sugar that they make is very inferior. Europeans now confine their attention to the refining of the raw material which they buy from native middlemen. There are only four refineries in Bengal and the North-West Provinces, namely, at Cossipore, at Shajehanpore, at Cawnpore, and at Sakri (in Bihar). These refineries pay good dividends if worked up to their full power. Their profits have been materially increased since the imposition of the countervailing duty on bounty-fed imported sugar, as the demand for Indian refined sugar has increased, while the prices of the raw material have remained stationary. Prior to the introduction of the countervailing duty large quantities of sugar were imported into this country. This, in face of the fact that India is itself a sugar-producing country, is, I think, a very strong proof that the demand for Indian sugar, at present rates, will not decrease, even if the industry is revived in Bihar. I see in a recent number of the *Pioneer* that the importation of sugar has decreased by 75 per cent since the introduction of the duty. Two facts appear to me to be perfectly clear—

- (1) That the growing of sugarcane, and refining of the produce, will pay well at present prices.
- (2) That unless the increase in production exceeds the decrease in importation, present prices will remain unaltered beyond the ordinary fluctuations of the trade.

The area under sugarcane in Bengal in 1899 was 860,200 acres. The outturn of raw sugar from this area is estimated by Government officials at 16,000,000 cwts., or 1 ton per acre. This estimate of yield is no doubt based on previous results. It must be borne in mind that all classes of lands are included in the above area, and that the ordinary primitive machines are used for pressing, and we may therefore reasonably assume that from carefully selected lands, well cultivated, the best variety of cane, and up-to-date pressing machinery, an increase of 50 per cent in yield could be obtained. The annexed extract (marked B) from a note by Dr. J. J. Leather, in the Agricultural Ledger 1898, No. 8, supports this assumption. The area under indigo in Bihar in 1899 was 254,235 acres. Only a certain proportion of this area would be suitable for sugarcane, and it is extremely unlikely that more than a fourth would be planted with that crop for many years to come, even if the majority of indigo planters take to growing it. Thus we would have an increase in area under cane of 63,558 acres. At 1½ tons per acre, this would yield 95,337 tons of raw sugar, or a little less than an eighth of the present outturn of Bengal only. This increase in production could not seriously affect present prices. Dr. Leather estimates the imports at 75,000 tons of refined sugar, his estimate being evidently based on the average of several years *prior* to the imposition of the countervailing duty;

75,000 tons represent 100,000 of raw sugar, and if the statement in the *Pioneer*, already referred to, is correct, the imports for the current year would only represent 25,000 tons of raw sugar, and it is quite possible that in the near future the importation of bounty-fed sugar will cease altogether.

I annex extract from—

1. Dr. Leather's letter on sugarcane (marked A).
2. Dr. Leather's note (marked B).
3. Table showing cost of production of sugar and its value in Queensland, Barbadoes, and Bihar (marked C).
4. Sakri refinery price list (marked D).
5. Rosa Company's refinery price list (marked E).

*P.S.*—The question of manuring and its results is too complicated to deal with without very carefully examining all available information as to soils, etc., but should manuring eventually become a necessity, the cheapest way to procure the by-products of vegetable soils, said to be the best manure for sugarcane, would be to establish oil mills at the growing centres.

## A

*From Dr. Leather to Mr. Hudson, dated the 13th January, 1900.*

In reply to yours of December 28th last: the cane grown around Poona is called *Pundia*, and is probably as good a cane as we have in India. But I fancy the *Samsara* of Burdwan district, is as good. The cost of carriage of the seed cane would be much less from the latter place. It must be sent to you whole, or at most cut in half lengths. None of the Indian canes can be propagated by seed. It has all to be planted from cuttings of the cane itself. You will get the seed cane through the Director of Land Records and Agriculture, or the Poona cane from the same office, Poona. The average yield of *gur* obtained at Poona is assumed to be about 8,000 lbs. per acre. We have got a good deal more than this at the Government farm, but 8,000 lbs. is reckoned to be the cultivators' average.

*N.B.*—I don't think it is the least use trying to grow cane as they do in your part, you should get a cultivator from Poona or Burdwan to show you how they do it.

## B

*Extract from note by Dr. F. W. Leather, Agricultural Chemist to the Government of India, in Agricultural Ledger, 1898, No. 8.*

" As to the general importance of experiments on the sugarcane crop, it is almost unnecessary for me to say anything. It is clear, in the first place, that so long as India has to import sugar (the net amount is about 75,000 tons annually,) there is room for an increased production. It is also clear that, whilst an article of diet which is common to the people generally, is imported, the cost of production is higher than it should be. But this is not all; for the greater part of the sugar produced goes to the cities and thus becomes in a measure a luxury. Then, too, there is the difference between the outturn per

acre, as realized in the Deccan and Bengal on the one hand, where with good varieties and good methods of cultivation, some  $2\frac{1}{2}$  to 4 tons of raw sugar is obtained, and in Bihar and the North-Western Provinces on the other, where the outturn is certainly not more than 1 to  $1\frac{1}{2}$  tons per acre, and is often much less. As has been shown in the course of this section of my report, there is no need to go outside of India for good varieties, nor to other countries for good methods of cultivation. The best varieties are met with, and the methods of cultivation in some parts are very perfect. What is wanted is the introduction of these good varieties and good methods into those parts, particularly the North-Western Provinces and Bihar, which provinces, it must be recollect, include much the largest area under cane of any provinces of India."

## C

*Value of sugar per ton and cost of production in Queensland, Barbadoes, and Bihar.*

	Value of refined sugar per ton.	Cost of production per ton.			Profit per ton.	Loss per ton.
		Growing cane.	Manufacture and refining.	Total.		
				£ s. d.	£ s. d.	£ s. d.
Queensland . . .	10 18 11 $\frac{1}{2}$	5 16 0	2 4 4	8 0 4	2 18 7 $\frac{1}{2}$	...
Barbadoes . . .	10 0 0	8 15 6	2 4 4	10 19 10	...	0 19 10
Bihar . . .	18 0 0	1 6 8	2 12 4	3 19 0	14 1 0	...

The figures for Queensland and Barbadoes have been taken from articles which appeared in the *Times* in September 1899. The price of sugar per ton for Bihar is taken from the Sakri refinery price list, the quotation is per maund of 80 lbs., and as a wholesale price would probably be lower, I have in the body of my notes put it at £15 per ton. In the figures for Bihar no credit has been taken for by-products as they are not mentioned in the *Times* articles on Queensland and Barbadoes, though it is possible their value may have been deducted from gross cost of production in those countries.

## D

*Sakri Price List for January 1900.*

		Per ton
		£ s. d.
White sugar, large grain, @ Rs. 11-8 per maund	=	20 14 0
" medium @ , , 11-0 "	"	19 16 0
" small @ , , 10-8 "	"	18 18 0
Pale yellow @ , , 9-8 "	"	17 2 0

*Per gallon*

Cooley rum	R. 1 per gallon	£ s. d.
		0 1 4

## E

## Rosa Price List for November 1899.

		Per ton
		£ s. d.
Loaf sugar, double refined, @	Rs. 15-8 per maund	27 18 0
Crystallized, white	@ 14-8 "	26 2 0
small grain	@ 13-8 "	24 6 0
" Pale yellow	@ 12-0 "	22 10 0
" Yellow	@ 11-0 "	19 16 0
" Dark brown	@ 9-8 "	17 2 0
		Per gallon
		£ s. d.
XXX rum	@ Rs. 7-8 per gallon	0 10 0
XX "	@ 6-4 "	0 8 4
X "	@ 5-10 "	0 7 6
Rosa "	@ 5-2 "	0 6 10

## F

## Mr. J. C. Aguilar's statement of cost of refining per ton, dated 31st January 1900.

	£ s. d.
Outturn for one day, 18 tons	
Consumption of coal, one day, 18 tons	12 7 0
Establishment	4 0 0
Miscellaneous expenses, oil, etc.	0 10 0
	<hr/> £16 17 0

Average cost per ton 19s.

## [ Appendix No. 2 ]

## Memorandum on sugar growing by Mr. H. Collingridge, of Daudpur, dated February 14, 1900.

A great deal of this province is undoubtedly suitable for the growth of sugarcane, and between 1840 and 1850, it was cultivated to a large extent by European planters in the place of indigo, which at that time was not a paying industry. From all I have heard, I believe that it did not pay, and was eventually given up for indigo, which commenced to revive again. In those days, transit was a great difficulty, and added greatly to expenses, as well as to disposing of the sugar otherwise than locally. Machinery was used, but to what extent I do not know. Since then, sugarcane has been grown only by natives, and the methods employed by them for extracting the juice are very primitive. Still, however, they succeed in making it pay, although the cane is said by Dr. Leather, Agricultural Chemist to the Government of India, to be very inferior to that grown on the Bombay side, and their lands are not so carefully cultivated.

Indigo factories, with their own lands and leases of villages, have a large choice of cultivation at their command, and with constant changes, together with manures and better class of cane, combined with machinery, should be able

to show a much larger profit than the native does. Sugarcane can be worked simultaneously with indigo. The crop would be planted before the indigo sowings commence, and would be manufactured after the indigo crop was finished, and would not therefore interfere in any way with indigo. Sugarcane lands, I believe, give good indigo crops the following year, as the roots of the sugarcane do not go down more than a foot or so into the ground, whilst the tap roots of indigo work down nearly 3 feet, and they would therefore be a good change for indigo. I should certainly not recommend putting more than a quarter of the present cultivation under indigo into sugar cane, though it is possible that the lands in some factories might enable more to be grown. The machinery at present available, at most indigo factories, would probably assist the crushing, etc., of the cane, but it must be remembered that, if owing to the expense of fitting up a factory with the necessary extra machinery, only one or two factories in a concern could be used, the expenses of carting plant from a long distance would be heavy.

*Cane for planting.*—Dr. Leather writes, under date of 13th January, 1900, “The cane grown round Poona is called Pundis, and is probably as good a cane as we have in India, but I fancy the Samsara, of Burdwan district, is as good. The cost of carriage of the seed cane would be much less from the latter place.” I have communicated with Mr. Maddox, Acting Director of Land Records and Agriculture, Bengal, regarding the supply of seed cane, and I have just heard from him, enclosing a letter from his assistant, dated 2nd February, 1900, in which he writes, “I beg to report that I subscribe to Dr. Leather’s opinion to experiment with the Samsara variety of sugarcane in Bihar. This is a soft, thick, variety, which is cultivated to a large extent in the Burdwan district. It has given very good results in our Farm, and the gur manufactured from its juice is much appreciated by the cultivator of Bengal.” The price, however, is Rs 4 per kahan, which weighs about 8 maunds, and it takes 12 kahans to sow one acre. The railway freight from Burdwan to Muzaffarpur is 0-13-1 per maund, so with cutting, carting, etc., the seed cannot be laid down under Rs 130 to 140 per acre, according to the distance, which is a heavy item to start with, and it will therefore take some time before Bihar is stocked with much good cane.

*Cost of cultivation and manufacture of gur or shakkur.*—As sugarcane is at present grown in Bihar, I have, together with Mr. R. Hudson, made a rough estimate of the probable expenses incurred in cultivation, and manufacturing the juice into either “gur” or “shakkur” of an acre of sugarcane.

	Rs a. p.
Seed	9 0 0
Rent	5 8 0
Cultivation	4 8 0
Planting	2 4 0
Cutting and carting	11 4 0
Supervision	4 8 0
Manufacturing	8 0 0
	<hr/>
	85 0 0 or say £3 per
	<hr/>
	acre.

I have little or no figures to go upon to frame the above estimate, but I do not think I have understated it, taking into consideration the results of three factories where gur has been, and is being, made this year.

*Newada Factory (Mr. Lawrie's):—*

Cane cut . . . . .	acres 34.
Gur made . . . . .	Mds. 398 19s. 1c.
Amount realised . . . . .	R914-10-3.
Cost of manufacture . . . . .	R157-1-0.

This sugarcane was flooded during the rains, and the yield was consequently very disappointing, and, over and above, there was no European in charge of the place, so it is impossible to say whether the crop was looted or not.

*Newada Factory (Mr. Walker's):—* Two and one-fifth acres sugarcane were manufactured into gur, which was sold for R220, whilst the total expenses, including rent, cutting, etc., only amounted to R46, showing a profit of about R80 or say £5-6-8 per acre.

*Domrah.*—One acre gave 407 factory maunds of sugarcane, say 13 $\frac{1}{2}$  tons. Gur made, 32 maunds, value at R3 per maund = R96. Expenses are not given, as the work is proceeding. Mr. Wilson, the manager, writes that he expects better results from smaller cane. Manuring will probably be a very heavy item in expenditure, and is not included in this estimate, as it is impossible to lay down any basis; but, on the other hand, one may reasonably expect to get a larger return of saccharine matter from manured lands, which will counterbalance the expense. The seed in the estimate is put down at the usual price paid for sugarcane in Bihar.

*Yield of sugarcane per acre.*—I am informed that a fair outturn is 15 tons per acre, which should give about 1 to 1 $\frac{1}{2}$  tons of sukkur, and this is borne out by Dr. Leather. There are three kinds of unrefined sugar, namely:—

	R a.	£ s. d.
Râb . . . . .	value 2 8 per md. or	4 10 8 per ton
Goor . . . . .	" 3 0 "	5 9 3 "
Shakkur . . . . .	" 5 0 "	8 7 9 "

and the above were the prices paid for the same at Sakri sugar works, in December 1899. From enquiries I have made since, I find that R6 per maund is paid in the bazar, at Muzaffarpur, for good shakkur.

*Refining sugar.*—This at present is done at Sakri (Bihar), Cossipore (Calcutta), Cawnpore, and Shahjehanpur in the N.-W. P., and I believe these are the only refineries on this side of India. I am given to understand that at Sakri the cost of making one ton of refined sugar from shakkur is 19s. per ton; probably it is dearer elsewhere, as labour would be more expensive. Apparently the difficulty is to have a sufficient stock of raw sugar to enable the work to be kept going the whole year, and that must militate against good dividends, but it would be different if planting and refining were combined. A central refinery might be connected with a group of factories which could arrange to grow sufficient cane for a year's supply, and after the raw sugar had been made it could be stored at the factories, till it was required at the refinery, as every factory has plenty of godown room available. I suppose a certain amount of loss would occur, but I am unable to say how much, though I should be inclined to think it would not be considerable. Supposing it were decided to work a refinery independently of the factories, it would have to buy the raw sugar in the open market, in competition with a refinery already working in

these districts. Mr. R. Hudson's corrected figures, showing 19s., as the cost of refining a ton of shakkur, instead of 12s., would only show a profit of £1 17s. 4d. per ton of sugar, and from this would have to be deducted interest on capital, so the profit on refining alone would not be a very large one.

In the "Times" of 2nd September, 1899, the writer on the sugar industry states: "The time is approaching when cane sugar will, if conducted by brains, re-establish itself in that command of the markets, from which it has been temporarily displaced by its parvenu, but more intelligently managed, rival. The 'ultimate possible' in the cheapening of beet sugar has been much more nearly approached than in the case of cane sugar, which has a far larger margin of potential improvement to draw upon. In Germany, where most progress has been made, the most recent (and economical) figures show that 8 tons beet-root make one ton of sugar, and that beet-root costs 17s. 8½d. per ton (as much as over £2 per ton in Wurtemberg), in other words, the raw material alone costs £7 2s. 8d. per sugar ton. Besides this, only 13 tons beet-root are grown to the acre; now only under most decidedly unfavourable conditions of soil should less than 20 tons of cane be produced per acre." So, aided by the best machinery and careful cultivation, Bihar ought to be able to produce sugar considerably cheaper than Germany does.

*Manures for sugarcane.*—I understand that oilcake is one of the best manures for sugarcane, and if that is the case, I think it would be a good plan to work hydraulic presses for crushing oilseeds in conjunction with the refinery. Each concern connected with the refinery could grow a certain amount of oilseeds in conjunction with indigo and sugarcane, and could also purchase locally enough seeds to provide them with the oilcake they would require for manure, and it could thus be laid down at a much cheaper rate than it could be purchased, even if it was available, which is not the case. At Poona oilcake is extensively used as a manure for sugarcane, and the natives pay a very high price for it. From enquiries I have made, I understand that there is a large demand for oils, both for local and export consumption.

### [ Appendix No. 3 ]

#### *Memorandum by Mr. Ernest Mylne, of Beheea, on Sugar Cultivation and Manufacture in Shahabad.*

[ Herewith a memorandum regarding our experience of cane growing and sugar making in this district of which you can make any use you like. I have little or no experience of Tirhoot, but I am very strongly of opinion that sugar cultivation and making by Europeans in the Shahabad district is not possible. ]

Among other experiments some years ago we tried sugar cane cultivation, sugar making, gur, rab, kutcha and pucca chinee. The experiment was carefully gone into under European supervision, but on a small scale with a view to feel our way before launching into the purchase of costly machinery. After a trial extending over two or three years we had to abandon the venture as we lost money over it, and were convinced it would not pay. The following were some of the difficulties we had to contend against:—

- (1) Heavy cost of cultivation
- (2) Want of sufficient and suitable land near the sugar works

- (3) Want of cheap manure
- (4) Heavy cost of carrying cane to the works
- (5) Uncertain yield per acre owing to variable seasons
- (6) Refusal of the ryot to contract to grow cane for the sugar factory
- (7) Refusal of ryots to sell their standing crop of cane or sell any portion of it at a fair valuation

It may be put forward that our experiment failed because it was on a small scale, but the experience gained taught us that a large undertaking in face of the obstacles above referred to was impossible.

Though the conditions may be somewhat different in Tirhoot I believe the planters there will have, if not all, some of these difficulties to contend against, and possibly will find it no easy task to compete with the ryot in cane growing and the production of rab and jagri. Sugar works may be possible where suitable land is to be had close at hand, where irrigation is not necessary, and where the ryot would contract to grow cane, but such works, if remunerative (which I very much doubt), would probably benefit the few and not the indigo industry as a whole or the planters generally. Were the Tirhoot planters to put in cane as extensively as it is proposed there would seem to be a real danger of prices running down to such a figure as would leave little or no margin. If the planters really want to know what is in cane growing and sugar making, the most sensible plan would be for them as a body to form a company to put in, say, 500 acres of cane and run up a small refinery with the newest machinery, which would be to the fore should the venture prove successful; should it prove otherwise the individual loss would be small and shared by the community. A practical test such as I suggest would be of more value than all the theories and opinions the committee could gather.

I give below what it costs in Shahabad to put in a bigha of cane and to turn it into *gur* or *rab* in the native method. The Shahabad bigha is five-eighths of an acre:

	<i>R a. p.</i>
Rent for 1½ years at R6	9 0 0
Manuring with village sweepings	5 0 0
Seed or cuttings, 8,250 at R2-8 per 1,000	3 8 0
Ploughing 10 times at R0-8	5 0 0
Digging or hoeing 8 times	5 0 0
Canal water, including hot weather rate	4 6 0
Sowing cuttings	1 0 0
Squeezing and boiling juice at 4 annas per táo or boiling on an average outturn of 50 táo	12 0 0
Supervision, sundries, and interest to mahajan	7 8 0
	<hr/>
	52 14 0

Take the average outturn to be 50 táo, each táo or chaki being about 20 pucca Calcutta seers = 25 mds. *gur* at an average bazar rate of 14 pucca seers

71 8 0

[ Appendix No. 4 ]

*Note on Sugar Cultivation by Mr. W. H. Moreland, I.C.S., Director of Land Records and Agriculture, N.-W. P. and Oudh.*

In the literature of the subject there is some want of uniformity in the nomenclature of the various sugars: in this note I use the following terms:

*Cane-sugar*, denoting the form of sugar that exists in the ripe cane.

*Invert-sugar*, denoting the products of hydrolysis of cane-sugar whether produced by the action of dilute acids or by the ferment *invertase*.

2. In discussing the proposal to replace indigo by sugarcane, I shall have occasion to insist on the necessity of adhering to certain principles which are recognised by cultivators in this part of the country; I will therefore begin by stating these principles and explaining at some length the grounds on which I consider their acceptance indispensable to the economical production of sugar. The first principle is that the production of cane-sugar per acre depends, other things being equal, on the skill and care of the cultivator. Numerous detailed rules come under this head which I may pass over as differences of soil and climate prevent their universal application; but the general principle which I have stated would receive the consent of any skilful sugar-grower in these provinces. The second principle is that the time chosen to cut the crop materially affects the product, and the third is that once the crop is cut there must be no loss of time. The cane should go straight from the field to the press, and the juice should go straight from the press to the boiling pan. Four arguments may be stated for holding that adherence to these principles is indispensable.

3. In the first place, the principles are the result of many generations' practical experience, gained by men whose income depended on the success of their cultivation. In the second, they are found to be necessary by persons who have taken up cane-growing with no previous prejudices. As an example I may cite the experience of the present superintendent of the Cawnpore farm who came to these provinces from Madras, and who, as the result of his seven years' experience of practical work here, tells me that the necessity of adhering to these principles would have been obvious even if the whole subject had been outside the range of science. Thirdly, there is the fact that these principles are found to apply in other countries, where the cane is grown under very different conditions. On a recent visit to Queensland I found that their importance was clearly recognised by the heads of the industry, and that though the local conditions are such as to permit profitable manufacture without a strict adherence to them, the loss in sugar that results from any deviations is fully admitted. Fourthly, there is the fact that these practical rules appear to be in close accordance with what is known of the physiology of the sugarcane. It will perhaps be convenient if I explain this last statement in rather fuller detail, premising that I have not studied this branch of the subject experimentally and that the facts which I state are drawn from the latest literature on the subject that I have been able to procure.

4. Cane-sugar appears to be an intermediate product of the plant; that is to say, that though it is produced in the leaves with a view to being consumed

in the nutrition of the cells, it cannot be assimilated *in the form of cane-sugar*, but must first be inverted ; the invert-sugar which results can be readily assimilated by the cells. Thus we may say that in the growing plant there is a continual production, and at the same time a continual destruction, of cane-sugar. When, however, the period of active growth comes to an end, usually in these provinces about the middle of October, the production of cane-sugar continues, but the rate of destruction falls off as there is no production of new growth in progress, and consumption is limited to the demands of the existing plant ; there is thus at this period an excess production of cane-sugar, which is stored up in the sap. If the plant were allowed to stand, this cane-sugar would be consumed as soon as the new period of growth should set in ; but the crop is cut before this period arrives, and the aim of the cultivator should be to cut the crop exactly at the period when the accumulation of cane-sugar is at its maximum. If he harvests too early, he loses the additional amount of sugar which would have been produced if he had waited longer ; while if he waits too long the stock of sugar has begun to diminish, being expended in starting the new season's growth. This then is the scientific justification of the practical rule which insists that the crop shall be cut exactly at the right time : the importance of the rule probably varies according to the length of the resting period, which again depends on the climate, being greatest when the winter is most severe.

5. When, however, the canes have been cut and stripped of their leaves, the supply of new cane-sugar is irretrievably cut off, and by no process that has yet been discovered can it be increased ; thus whatever inverting forces may be at work within the cut cane have full scope, and whatever is inverted is lost. I do not know of any investigations showing exactly what forces are at work in this direction ; but it is known that the juice of the cane has an acid reaction, and that dilute acids can effect inversion ; while from the fact that cane-sugar is regularly inverted in the metabolism of the living plant, it may be inferred that the appropriate ferment, invertase, is present in the tissues, and, if not actually in the juice, may be brought into it in the process of crushing. Again, it seems probable that all vital processes are not immediately stopped when the cane is severed, but that metabolism continues for some time : this would account for a good deal of deterioration when once the supply of cane-sugar is cut off. Thus any changes that will take place after the cane is cut will diminish the quantity of cane-sugar, so that the practical cultivator has anticipated the recommendations of science in insisting that no time shall be lost between the field and the boiling-pan.

6. Owing to climatic and soil variations it is not possible to state so definitely the scientific basis of the remaining principle,—the importance of care and skill in cultivation. It is obvious, however, that the amount of cane-sugar accumulated on an acre will depend mainly on the perfect health of the individual plants, and that this condition can be secured only by attention to the details of cultivation, especially in the period between the preparation of the seed-bed and the setting-in of the monsoon.

7. These then are the grounds on which I think it desirable to insist on the importance of the practical rules of cultivation ; but, as I have incidentally mentioned above that some deviations from these rules are admitted

in Queensland, I will now describe the extent of these deviations and the local circumstances which render them admissible. In what follows I am describing mainly what I learnt at a large and thoroughly modern factory, the manager of which is a recognised authority on sugar, and the staff of which includes three or four chemists; the plant of this factory represents an expenditure of about £120,000.

8. First as regards the rule that the cane should be cut just when ripe, it is admitted that the greatest quantity of sugar per acre would be obtained if the harvest season were limited to about two months, but it is impossible that the plant could be worked remuneratively if the season were so limited, and it is more profitable business to work for about six months in the year, thus dealing with a much greater quantity of sugarcane, and securing a larger gross outturn.

9. Speaking roughly, it may be said that, in an ordinary year, during the optimum months the cane will yield fifteen per cent of its weight of cane-sugar, during the two months before this period it will yield about fourteen or a little less, while the first two months of the harvest it will not yield more than twelve and a half per cent. In other words, if a thousand tons of cane were crushed in the optimum period it would yield 150 tons of sugar, while if the crushing were spread evenly over six months, the yield would be 138 tons or a loss of eight per cent. In the case I am describing, this loss falls mainly on the farmer owing to the system under which work is carried on; the farmers agree to grow so much cane, to be delivered to the factory at a price of so much per ton of such a quality, quality being ascertained by analysis of a sample of each lot delivered. Thus the farmer receives less money for cane cut early in the season than he would receive if it were allowed to stand till later; and some kind of arrangement is made by which this loss will fall more or less equally on the various farmers, some part of the crop of each being cut early and some later. Presumably the farmers consent to this arrangement because in this way they are sure of a market for the produce of a larger area, and can thus secure on the whole a larger income.

10. Next as regards the loss of time, it is of course not possible to ensure that the cane shall go straight from the field to the mill when the cane fields stretch eight or ten miles from the factory, but time is saved in every possible way. The cane-lands being continuous and practically uninterrupted by stretches of other cultivation, it is found profitable to have a system of light railways running through them, from which temporary sidings can if necessary be laid down to accommodate almost every field. When the factory is ready to take the produce of a particular field, intimation is sent to the farmer that empty trucks will be provided at such a time, and will be taken away by such a train. The farmer has to load up the trucks ready for the train, which picks them up and takes them straight to the factory yard. Here they pass over a weighbridge and thence direct to the "feed" of the mill. The trucks are emptied on to the "feed," which carries the cane under the rollers without any further delay, and as the juice is pressed out it is pumped direct into the evaporators. Thus it will be seen that a large amount of capital has been sunk and a considerable organisation is maintained partly at least with a view to avoid delay in the treatment of the cane.

11. And as regards the style of cultivation, this factory, like most others that I have heard of, has found it necessary to adopt the system of payment by analysis; a scale of prices per ton is drawn up according to the percentage of cane-sugar, and as each consignment comes in, a sample is taken to the laboratory on the premises, where the percentage is determined; the price can then be calculated from the weight, as ascertained at the weighbridge, and the composition as determined in the laboratory.

12. In order to show how the farmers can bear the loss arising from the long period of harvesting, it is necessary to give a brief account of the conditions of cultivation. In the part of Queensland of which I am writing, the normal outturn (using the word normal in the official sense), is about 25 tons of cane to the acre; and as on the whole about 14 per cent of this is cane-sugar, the farmer expects three-and-a-half tons of sugar to the acre; if all his crop were harvested at exactly the right time, he might perhaps expect almost four tons, a substantial difference it is true, but not a matter of life and death. The cost of production is practically reduced to two items, planting and harvesting. When a farmer starts to grow cane, he begins by cutting the trees and burning the brushwood and the cane tops are then at once planted between the tree stumps. Sometimes the ground is first ploughed roughly, sometimes the tops are merely dibbled into holes. These plants will ordinarily give successive crops for five years, without either manure or irrigation; after about five years the stock wears out and the land has to be replanted; but so rich is the land that the most that has hitherto been done in the way of manuring is to turn in a leguminous crop between two cycles of sugarcane. Thus despite the very high cost of labour, there is so little work that the crop is not very expensive to grow, while the cash return is high and a large area is available. Contrast the Queensland farmer with the Gorakhpur cultivator, who according to my calculations does not expect to get more than Rs 94 from an acre, and to do so spends Rs 82, if the cash value of the labour of his family is included.

13. This difference is due mainly to the scale of work and to the condition of the soil. The Gorakhpur-cultivator has neither the capital nor the land necessary to grow a large area, and even if he had it is not to be expected that the old lands of these provinces will yield the same crop as the virgin soils of Queensland. The point on which I wish to insist here is that the Queensland farmer can afford to sacrifice some portion of the sugar in order to work a larger area; but this course is out of the question in these provinces, as, even assuming that the land is available, the expense of cultivation is so great that the crop can be made to pay only when most of the labour can be supplied by the members of the cultivator's family. The evidence in support of this statement will be offered immediately.

14. If a planter decides to enter on the sugar industry, his intervention may begin at one of three stages: he may grow the crop for himself, or he may take over the raw produce from the cultivator either in the form of cane or of juice, or he may take over the *gur* or *rāb* and refine it for the market. In the last case his position would practically be that of a sugar refiner such as the Rosa Company or the Cawnpore sugar works, with the advantage of being able to control the supply of raw material from his estate. This course is probably not contemplated, and in any case it is a purely commercial

matter which I am not competent to discuss; I pass on therefore to a consideration of the other two possible courses.

15. First, as regards the planter who grows cane for himself, either on his own land or on land rented for the purpose. In this case he should have no difficulty in so organising his business as to secure that the crop can be cut at the best possible period, and that no time shall be lost in extracting the sugar from the cane. Whether, however, he can afford to cut all his cane at the optimum period will depend on the amount of machinery which he employs. If he adopts the small bullock-mill and the open furnace, he will be in the same position as the small grower, with this difference that the small grower does most of his work himself and has a very small wages bill, while the European will have to pay cash for all labour, and perhaps for some supervision as well. If, however, the planter goes in for expensive power machinery, the same question will arise as in Queensland; in order to keep the machinery employed for a sufficient period to earn the interest on its cost it may be necessary to extend the harvest season; and as the yield will undoubtedly be less and the cost of production probably heavier than is the case in Queensland, it may turn out that the sacrifice of part of the sugar involves the sacrifice of the year's profit. A definite opinion can hardly be offered on this point in the absence of information as to the cost of machinery and the amount of capital that would be available; but it is a point that should in my opinion receive careful consideration from the individual planter who proposes to put much capital into the industry. I am inclined to think that the resting-period of the cane is shorter in these provinces than in South Queensland, so that the loss from harvesting out of season may be expected to be greater than the figures I have given.

16. It is, however, when we come to the third principle I have laid down that the risks of direct cultivation appear to be most serious. Sugarcane is a most difficult crop to grow, so much so that in these provinces the presence of the crop is an index of the most skilful cultivation. At any rate it is an entirely different art from the growth of indigo; and a planter who took up sugarcane with no experience beyond that derived from indigo and cereals would find the practical acquisition of new knowledge a very costly matter. Experience is needed to tell exactly what operations should be performed, and exactly at what seasons; and more experience is needed to tell whether these operations have been skilfully performed. As I have said above, the crop is one that depends more than most on the skill and care of the cultivator; and even if the skill can be hired, the care that a man will give to a crop he is paid to look after is very different from that which he will give to his own field.

17. Again the labour bill must form so large a proportion of the cost of growing cane that it is imperative to secure the utmost efficiency of labour. I do not know how the case may be in Bihar, but in these provinces it is usually thought that no European can get as much work out of a labourer as that labourer would give willingly to his own land; and that very few Europeans can get as much work out of a body of labourers as can a native who knows exactly what has to be done and is working in his own interest. In this connection it will perhaps be of interest if I give the results of some enquiries into the cost and profits of growing cane in these provinces. The first I shall notice was made about twenty years ago by Mr. J. B. Fuller, and purports to be an average for the whole provinces. He reckons all necessary labour in cash,

whether or not it is paid for by the cultivator; but he allows nothing for "the care and attention which an industrious cultivator and his family apply to their land out of hours, and which often serve to extract a profit under circumstances which would otherwise allow of none." Calculated thus, the cost of cultivating an acre is about R63, of which the labour bill accounts for R28. The cost of making *gur* adds another R41, so that the total cost of production comes to R104. The normal yield is taken at thirty maunds (using normal as always in the official sense), so that with *gur* selling at R3.8, a fairly high price on the average, the cultivator would exactly clear his expenses but would have nothing over; in other words all that the average cultivator could draw from a normal crop, that is, a crop as good as he has any right to expect, is the hire of the labour which he and his family have supplied.

18. The next estimate I shall notice is one which I drew up two years ago in the course of the discussion of the bounties question. It is on the same lines as that which I have just given, but the cost of each item was carefully redetermined and the estimate was framed separately for each division of the provinces. On this estimate, taking *gur* at R3.40 per maund, the highest profit per acre was R30 in the Meerut division, where everything favours the crop; the lowest was seven rupees in Agra, where there are numerous disadvantages. The figure for the whole of Oudh was R18, while for Gorakhpur, which of all the divisions has I suppose the closest resemblance to Bihar, it was as low as R12. Remembering that these calculations are based on normal outturns, they so far confirm the earlier estimate that they show clearly that the advantage of the crop to the cultivator lies in the scope it affords to his best and most unwearying labour.

19. The third estimate was made last year by a number of selected officers, and quite independently of the foregoing. In this enquiry, the actual outturn of the season was ascertained and the cost of production estimated on a cash basis. The results obtained were in Aligarh, R20 profit; in Muzaffarnagar, R8; in Etawah, R4; in Meerut, R2; in Cawnpore the account balanced, and in Mainpuri there was a loss of R14. These results were obtained by selected officers in the Revenue Department; similar enquiries made by officers in the Irrigation Department showed small profits in four cases, and small losses in two. Bearing in mind that the season was unfavourable for sugarcane, these estimates appear to me to be in close accordance with those already quoted; and the whole series tends to establish the fact, which indeed is a matter of notoriety, that no one can grow cane in these provinces unless he can command labour without cash payment. Or in other words, the chief advantage of the crop is the opportunity it affords for employing the labour of the cultivator and his family, especially at times when they have not much else to do.

20. I have no knowledge of the actual conditions of cultivation in Bihar, so that I cannot say how far these estimates apply: but it should be mentioned that in these provinces the cost of irrigation is generally an important feature, varying from seven to twelve rupees, or even more in some cases. So far as irrigation can be dispensed with the profit will of course be increased. My object in giving these figures is to establish the truth of the ordinary idea that in these provinces sugarcane will not pay the man who looks on. It is for those who have a knowledge of Bihar to say whether the conditions are so different there that the same conclusion does not apply.

21. The alternative before the planter is to leave the field work in the

hands of the native cultivator, and take over from him either the cane or the pressed juice. In this case he will not run against the principle of cultivation, provided that it continues to be the interest of the grower to get the maximum of cane-sugar in the cane. This condition can, so far as I know, be attained only if the price is determined by analysis. Otherwise it would be the cultivator's interest to produce, not as at present the richest cane, but either the heaviest cane, or the cane yielding the largest quantity of juice. The cultivator would, I believe, in no long time adapt his cultivation to the conditions of his market, and the planter would find himself receiving in the first case a heavy cane with little juice of poor quality, and in the second a large quantity of thin watery juice, which would require much fuel for evaporation and would yield a low proportion of cane-sugar. In either case he would find his cost of production much increased and his yield of sugar seriously diminished.

22. But there are also drawbacks in the way of purchase by analysis. The work of analysis requires a good deal of practical training in a specialized laboratory in addition to a thorough general knowledge of chemistry. I believe I am correct in saying that very few planters could do this work themselves, and that the great majority would have to employ a chemist. But a chemist with the necessary qualifications would probably cost at least four or five hundred rupees a month, which would add very materially to the fixed expenses of the factory, unless things were on a larger scale than is likely to be possible. The apparatus too is, I believe, sufficiently costly to make some difference. It is very doubtful whether several factories could combine to employ one chemist; each would want him at the same time, and no one would want him when any one could spare him. The samples too should be examined at once and on the spot, as they would probably deteriorate rapidly if sent to any distance for analysis.

23. In this connection there is another question which I can raise but which must be answered by those who know the Bihar peasant. Would he agree to sell by analysis, or would he constantly dispute the chemist's dictum, based on processes which he cannot see and which are unintelligible to him? I am quite sure that our eastern cultivators who live on the borders of Bihar would demand an impartial court of appeal, and that the system of analysis would be very unpopular even if any one would agree to it at all.

24. There seems therefore to be some risk either way: the planter may buy by weight alone, and find that he cannot rely on the cane being sufficiently rich to be worth crushing: or he may buy on analysis, at the risk of stirring up ill-feeling and of being unable to get enough cane grown to feed his plant. It is necessary, however, to turn aside at this point from my argument to notice the *bel* system of Rohilkhand, which at first sight appears to show that cultivators will not allow the quality of their cane to deteriorate when they sell by weight alone.

25. This system exists in a few districts only; the cultivator presses the juice for himself but hands it over to the *khánsári* who boils it down into *ráb* with his own plant. The price is fixed at so much per hundred maunds of juice; and where this system has prevailed for many years no complaints appear to have arisen that the quality of the juice has become markedly inferior. It may therefore be thought that what the *khánsári* can do without loss may be safely

done by the planter; but there are some distinctions to be taken into consideration. In the first place the *khândârî* does not pay a uniform price; he knows from his experience the approximate value of the juice produced by the cultivators of a particular village, and he regulates his schedule of prices accordingly. Next there is the extraordinary minuteness of the native manufacturer; his attention to detail is such that by watching the process of evaporation he can form a very good idea as to the quality of the juice, and can regulate his next year's prices accordingly. I doubt very much whether such acuteness of perception would be acquired by the majority of the planters. And finally there is the important fact that the *khândârî* often pays rates so iniquitously low as to leave a handsome margin, while he has obtained such power over the cultivator as almost to deprive the latter of initiative. The usual method by which he attains this position is, I understand, to offer at first good prices (including a liberal advance), but with high rates of interest and severe penalties for non-delivery of the amount of produce stipulated. The cultivator who is at the time in need of cash does not as a rule scrutinise the terms very closely and they are in fact very burthensome. He very soon therefore finds his account does not balance, and that when he has parted with all his juice he is still in debt to the *khândârî*. Once in this position, the *khândârî* can force him to accept very inadequate rates for the next year, so that he is quite unable to clear himself, and comes completely into his creditor's power, as he knows that a decree can be got against him, and that he can be at once sold up and ruined. It is obvious that people in this position are not likely to attempt to do anything that would injure their master when he has the power of immediate and effective retaliation. These considerations show that the *bel* system is hardly a fair precedent for the planter; and it may perhaps be added that, so far as I know, the Bihar cultivator is infinitely more cunning than the small farmer of Rohilkhand.

26. To return then to the main course of my argument, I have attempted to show that if the planter takes over the raw material, there is a risk that he will not get the same quantity of cane-sugar as would be obtained by a cultivator working for his own benefit; and I have also shown that, if experience in these provinces is to be accepted as a guide, the margin of profit is very small in the case of the cultivator, so that the planter could not afford to sacrifice any portion of the possible outturn unless he can introduce great economies into the processes of manufacture; the possibility of such economies will be considered further on. The next step in my argument is to show that the planter who takes over the raw material will have difficulties in respect to the other two principles which I began by laying down. First, as regards the time of harvest. The same considerations come into play here as were stated when I was dealing with the system of direct cultivation; if work is undertaken on a small scale and with elementary plant, there should be no difficulty in harvesting within the optimum period; but in this case it must be remembered that there will be few opportunities of economy, and that having regard to the low rate of profit it is open to question whether with a small outturn the business would be worth undertaking. If on the other hand expensive plant is set up, it is, I suppose, hopeless to expect that under any circumstances it could pay if worked for so small a period as two months, so that some arrangement would be necessary of the kind which I have described as being in use in Queensland. It is, however, very doubtful whether the Bihar cultivator could be brought into any

such arrangement ; if he is like cultivators in these provinces, he has a very fair idea of the loss that would result from harvesting his cane before it was ripe, and I do not think he would agree to do so unless he were to receive the full price for ripe cane, no matter what might be the time of harvest. It will be obvious from the figures that I have quoted that this course would seriously reduce the profits of the planter, who could scarcely afford to pay for sugar which he did not receive. Even if the system were introduced, each cultivator would probably clamour to have his own particular plot, "a very little one," cut at the proper time ; and there would be room for a good deal of friction and discontent, especially if the rotation were left to any extent in the hands of a native subordinate, who might see an opportunity for levying fees for priority.

27. And there would also be considerable risk of loss of time between the field and the evaporator : such an organisation as I have described at the Queensland factories would probably be quite out of the question except in factories of the largest scale, and doubtless in ordinary cases the cultivator would be required to bring his raw produce to the factory. This system would probably work out somewhat as follows ; at first the orders would provide that so many cultivators should bring their produce on a certain day, the number being so fixed as to provide just enough produce for the day's working ; no doubt some cultivators would be late and the factory would be insufficiently supplied with the raw material. After this had occurred a few times, the planter or one of his subordinates would arrange to have more cane cut than was required in order to keep the factory fully supplied, and there would generally be some cane left overnight ; it needs practical experience to know the extent of deterioration that may occur in a single night, and the aggregate loss in a season's work from this cause might be very serious. Again the cultivators would have no motive for punctuality ; at present they have a motive, for they know that the cane will deteriorate if allowed to stand after cutting and that the loss will fall on them, but when they are selling to the planter a slight delay will seem of no importance.

28. Thus it will be seen that there are distinct risks of the loss of cane-sugar both in cultivation and in harvesting ; the whole of the former and part of the latter risks could be avoided by the system of purchase by analysis ; but, as I have shown above, that system has difficulties of its own even if the cultivators would agree to it ; and in any case there would be, with any but moderate sized factories, great difficulties in arranging a rotation of harvesting so as to keep the plant employed for a sufficiently long season.

29. I have now enumerated the risks that the planter would have to consider owing to the existence of the three principles that I began by laying down, and I turn to another point that appears to me to be of importance from the planter's point of view. If the ordinary cultivator makes little or nothing out of the crop beyond the hire of his own and his family's labour, it is obvious that the planter can make a profit only by introducing large economies and improvements. But this can be done only by a man possessed of very special qualifications. The manager of a factory must first of all have a thorough practical knowledge of the art of cultivating sugarcane, that is to say of the most difficult branch of the cultivator's art ; and he must be well acquainted with the numerous varieties of the cane, a study in itself of considerable magnitude

Secondly, he must know a certain amount of general chemistry and a good deal of that complicated subject, the chemistry of the sugars. Should he desire to do his own analyses he will need a course of technical training, and if he relies on others for his analytical work he must still know enough chemistry and general plant-physiology to understand the results put before him, and to apply them in his future work. For it will, I suppose, be admitted that success in the sugar industry is out of the question without the aid of science; where the work has been done by rule of thumb the industry has decayed; and where it is flourishing the success may be traced to the steady application of science to every detail of the cultivation and manufacture. Thirdly, the manager will need to have a good practical knowledge of machinery, especially if there be any considerable amount of plant; and he will also require the ordinary qualifications of a man of business. All over the world in fact the management of sugar factories is recognised as a special profession requiring special qualifications and commanding high salaries; and there must be considerable local advantages to enable amateur management to compete with professional.

30. While enumerating the disadvantages under which the planter would labour, it would be wrong to overlook the risk of a breakdown of the machinery during the harvest. This risk, and the difficulty of obtaining skilled repairers without delay, has to my knowledge deterred many native capitalists in these provinces from procuring expensive machinery; and it would be specially serious in the case of sugar, as any delay would interfere with the work of the harvest and would probably involve a loss of sugar even after the plant was again in working order.

31. The disposal of the extra sugar produced is also a matter for consideration. The intention, I suppose, is to put it on the Indian market, where it will be in competition with the products of Mauritius and of European countries, as well as with the produce of these provinces. There is very little possibility of extending the demand for sugar, whether raw or refined, except by a substantial lowering of price; and profits in the industry in these provinces are so low that a substantial fall in prices would ruin the industry,—the most important of the provinces,—and thus produce or at least precipitate an economic crisis as serious as that which is now under consideration. The disorganisation of the market would of course re-act on the planters, and calculations of profit founded on prices recently ruling might prove very misleading in the event of a large extension of the acreage under cane.

32. I have stated at some length the disadvantages under which I think a planter would labour in manufacturing sugar, but I recognise that he would also have a good deal in his favour. The advantages will doubtless have been pressed on the attention of the Commission and I need not dilate on them; but I may bring this note to a close by indicating briefly the principal advantages that occur to me. In the first place a planter might be able to introduce better varieties of cane. There is no doubt that, from the point of view of yield, many of the Indian canes are behind those of other countries; at the same time, there is always the risk with new varieties that they may be specially liable to injury from disease or from accidents of season, so that prolonged experimental work would be a necessary preliminary. The manure supply could doubtless be organised with advantage; my own experience points to castor-cake being (within certain limits) an admirable manure for the plant, and perhaps it might

be profitable to grow castor on a large scale, and to apply the power of the factory in crushing the seed at times when there was no cane to be crushed ; the oil would probably fetch a profit and the cake would be available for manure. I do not know enough of agriculture in Bihar to say whether this particular form of organisation is possible, but I mention it as an instance of what I mean by the organisation of the manure supply. If again irrigation is found to be a necessity, the organisation of the water-supply would doubtless lead to increased economy. I doubt whether other economies are possible in the processes of cultivation, but there are certainly possibilities of improving the process of extraction ; better mills would extract more of the juice with a less than proportional increase of power ; improved furnaces and boiling pans would economise fuel, and the use of the centrifugal would enormously simplify the extraction of the molasses.

33. I am not prepared to express a definite opinion as to the balance of advantages and disadvantages ; the sugar industry is not a newly found eldorado, its possibilities have been thoroughly explored, and those who hope to make a profit out of it must be guided by past experience. So far as I know, that experience shows that except in places where local conditions are peculiarly advantageous, the industry can be permanently successful only in one of two cases, either in the hands of small men who will work unceasingly and pay attention to the very smallest details, or in the hands of capitalists who can command, and are willing to employ, the resources of science. The small man who only looks on, and the capitalist who works on in a rut, are alike failures, and as such are soon eliminated from the industry.

#### [ Appendix No. 5 ]

##### *Sugar Cultivation in Queensland, by Mr. A. F. Walker, of Brisbane.*

1.—Average temperature and rainfall : In the two principal northern sugar districts, Mackay and Cairns, the average temperature and rainfall last year were :—

	Cairns.	Mackay.
Temperature . . . . .	77 degrees (Fahr.)	71 degrees (Fahr.)
Rainfall . . . . .	98 inches	72 inches.

This may be taken as an average season for each district. Taking the temperature and rainfall month by month for the first six months of this year (we will include December to make the season, an average growing one, complete), the results are as follows :—

Month.	Average Temperature.	Rainfall (inches).
December . . . . .	78 (Fahr.)	9.17
January . . . . .	76	20.82
February . . . . .	75	0.65
March . . . . .	75	4.12
April . . . . .	72	0.78
May . . . . .	70	2.89
June . . . . .	68	2.17

Hot, muggy weather is the best for rapid cane growth, and when the sun shines strongly for a few days after rain, one can almost see it grow. Cold checks the growth of course, and frost will kill the young cane if severe and frequent, but cold is still necessary to make up the density and harden the cane.

Rain and then cold is very detrimental to growth, as the cane somehow deadens and if the water does not quickly evaporate, the cane will begin to "gum" inside.

2.—Irrigation : In a country like Queensland, taking of course the northern portion of it, where cane is extensively cultivated and really the staple crop, irrigation must needs be an improvement, owing to the very unreliable and capricious nature of the rainfall, and not only beneficial, but absolutely necessary in many cases, to obtain crops that will really warrant the labour expended in harvesting alone. The distribution of the rainfall on the average is not equal, and although it might be ample for a whole twelve months, such inequality destroys much of the value it would otherwise have. Unquestionably the experience in most districts favours rain, that is, the cane suffers less from an abnormally wet season than from an average dry one, and the porous nature of the soil and subsoil makes this easily understood. A growing year, however, with a fair distribution of rain during the twelve months produces weight, but perhaps less sugar, whereas irrigation, being under control, would have the effect of not necessarily producing weight at the sacrifice of sugar, which is an important consideration. To derive the full benefit of irrigation, however, it should go hand in hand with artificial manuring, which must be placed first in the matter of assistance to cane growth. There is very little irrigation done in Queensland, though experts have urged its general practice. Where it has been adopted, in the most northern districts, water has been distributed over the land by means of a series of wells, with windmills and flumes, but this will only work well where the areas of cane are small. For large areas windmills would prove unreliable and unequal to the work required, so that steam pumps would have to be used. There are immense possibilities in irrigation for cane growing ; and in places where the rainfall is uncertain, or where there are long periods of drought, successful cultivation would be impossible without. Here, however, rain at very short intervals can be depended upon from the middle of January to the end of March, though of late the seasons have been dry in comparison with previous years. Water lying for long on the ground, so as to make the cultivated area swampy, is exceedingly detrimental to cane growth, and the necessity for judicious drainage is undoubted. During the present season, regarded as a very fair one in the sugar districts, good rain fell in January and February, a little in March, more in April and May, and during the winter months serviceable showers were experienced almost at fortnightly intervals. To deal thoroughly with the question of irrigation, however, an exhaustive article would be necessary, and besides, in India, the home of irrigation, the matter has been brought far more up to date than in Queensland.

3.—Steam ploughing : There is little or none in the cultivation of sugar at present, the chief reason being the question of expense. Where the areas are small the steam plough is not serviceable by reason of the number of headlands that are necessary, and the sugar districts, being so far from coal mining localities, are not abundantly supplied with fuel. On many of the plantations they were tried long ago, but the machines have been put aside and are now lying idle. Again, so many different ploughs have been introduced to cover the whole of the work that the ground is ploughed and reploughed on the best plantations in so many different ways that the plain mould-board system does not save much time, unless the area of each field is very great.

4.—Planting the canes : Cane plants are the top joints of the stalks, taken from the finest lengths and best varieties of cane grown the previous season. That is, the cane is planted in March and August, the March cane being cut for crushing in July or August of the following year, when most of the mills generally start operations, while the cane planted in August is cut in November and December in the following year. The best of the cane cut in the latter month is reserved for planting, according to the area required, about from two to three tons of plants going to the acre on the average according to scrub or forest land. The practice of using *any* portion of the cane for plants is a decided blunder. Care must be taken to select the springy part near the top. In most districts in Queensland a length of about 18 inches, just below where the "cabbage" or leafy top ends, is cut off the stalk, the cane of course having been previously "topped" in the way of ordinary harvesting. There is no reason, however, why a great deal more of the top should not be taken than is the custom. In Honolulu and other places where cane cultivation is carried on most successfully and on most modern and scientific lines, the upper portion of the stalk is just cut sufficiently deep and near the hard cane formation to prevent shooting at the end, and again cut at the second or third visible point (assuming that the cane has been stripped of the dry leaves as high up as possible, that is, "trashed,") thus forming a plant ready for use it may be 14 or 18 inches long according to the length of the joints, and this should never exceed three, or four at the outside, which can be got from some varieties of cane without waste. There is no need to waste the cane in cutting plants, but only to take so much as is of no use for manufacture, containing no sucrose. The advantage of the cane top or terminal buds over other portions of the cane is an early, vigorous spring, with a rapid continuity of growth, producing in the end a fully matured and robust cane. Other portions of the stalk may be grown equally as well perhaps, but the spring is considerably slower and the resulting tonnage much less. Care should be taken to select plants from canes entirely free from "gum" or disease of any kind, as a few plants will spread disease over a whole field in time. The plants should be placed in a deep, well opened drill, two abreast, 18 inches apart, with "eyes" (little buds at the joints) on side in one direction and covered as the nature of the soil and prevailing weather may suggest. If the "eyes" on the plant are good only one plant need be dropped. After a spring a light moulding may be given, but the drills at this stage must never be broken in or levelled off. The method of planting is for the black boys to go out into the field with small bags full of plants over their backs, and walk down the rows as directed carefully dropping the lengths into the drill at the distance above stated, which they soon learn to do. The ground must of course be thoroughly tilled before planting.

5.—Manure : In Dr. Maxwell's report upon the Queensland sugar industry, upon which all late improvements in cultivation have been based, the question of past failure in raising abundant crops, the exhaustion of the land, and poor quality of the cane, is all summed up in the evidence he obtained regarding the want of manuring to all the farms and most of the plantations in the north. Personally I know some plantations that are now lying idle where successive crops were reaped for a period of 28 years without any manuring whatever to speak of. Nothing was given back to the land for all that was taken from it, and consequently the land was impoverished. Now artificial manuring has become a necessary part of the work on almost every farm of any extent, while

"green" manuring is also being largely adopted. The old idea of robbing the soil of elements by cropping without restoring any is recognized as disastrous, but the lesson has only been learnt by bitter experience in many cases. Still in many places the former careless waste of manures exists. The trash is still burnt, thus scattering to the winds the nitrogen and humus matter intended for the soil, and exposing the ashes also to being frequently blown away. The coarse molasses leaving the mills, which also contain notable quantities of the vital elements taken out of the soil, are found running to waste instead of being returned to the lands. The filter press refuse, rich in elements that the soil needs, is also wasted instead of being carefully reserved. The principal manures (artificial) used upon the land for cane are sulphate of ammonia, sulphate of potash, and superphosphate, as follows:—

Manure	Quantity per acre	Price per cwt
Sulphate of potash . . . .	One cwt.	R 15 per cwt.
Superphosphate . . . .	Three "	" 5 "
Sulphate of ammonia . . . .	One "	" 15 "

Green manuring has been extensively gone in for of late, planting the cane area after the third ratoons have been taken off with such greens as are most likely to replenish the soil with some valuable plant foods, while taking little of what the cane really requires. This saves expensive manuring, and also provides valuable fodder for stock, or the greens can be ploughed in afterwards and used as manure that way. These green manures are mostly cow-pea, velvet-bean, and other such fodders, while lupins have been urged by a great many as fertilizers. The advantage of both artificial and green fertilizers may be not so much the supply of plant foods not otherwise to be obtained from the soil by the cane, as the changing of unavailable into available forms of plant food. Sulphate of ammonia supplies the most expensive of all plant foods—nitrogen, containing about 20½ per cent of this element. Nitrogenous guanos are valuable manures again, also dried blood, kainit (the most common product of German potash mines) bone dust, and nitrate of soda. Farm-yard manure can be used without restriction or be mixed with any of the fertilizers already mentioned. No matter how well the land bears at the start, after the third ratoons have been harvested, manure should be liberally supplied. Such outlay will bring its own reward.

6.—Cultivation before and after planting: On this question an exhaustive article could be written without dealing too much with any portion of the necessary field work. The modes of handling the land here have for a long time been crude and superficial. In the deepest soils ploughing has been shallow, and more adapted for cereals than for the larger and wide reaching root of the cane in its search of food. A thorough preparation of the ground before planting, meaning the turning over of the surface soil to a depth that its staple will bear, from nine inches to two feet, and the movement of the sub-soil, followed by cross-ploughings and deep cultivation, is the ground work of the crop. Deeper cultivation of course depletes the ground of its stock of plant food rather than adds to it, as the crop is larger and more completely robs the land of what it contains, so there is need for good manuring where there is the best cultivation. In some sugar growing districts familiar to the writer soils yielding the largest crops receive the heaviest applications of manures in return. Shortly, however, the ground is generally ploughed twice after being broken up, harrowed and cross-ploughed, being finally ridged

and drilled in rows in the ordinary way of planting most other crops. The plants are dropped in the hollows left on the top of the ridges and afterwards covered in to the depth already stated. This is all done with the plough, except the planting of course, which is done in the way described elsewhere in this paper. The young cane should be kept free of all weeds until it covers the ground, and should be regularly cleaned afterwards until about four or five feet high. Up to that time the horse can go through it with the scarifier, the rows being about four feet apart. With a small plough, when the cane is about two feet high, the soil on each side is turned over on to the roots. After the cane is cut, and this must be about two inches under the ground, and the tops taken off, the plough goes between the rows and the soil is again thrown over the roots. The cane is not planted again, that is, but the roots are allowed to grow again, the same process of cleaning being gone through. The cane has been cut and again allowed to grow without planting, and yet again, so that one planting really does for four crops. This system is known as "*rattooning*," which has meant that ploughing after each crop shall not be done, and that the old root system of the previous crop shall be left practically undisturbed, but modern agriculture is against this. The cropping should not go further than second rattoons, or else a great falling off in yield will result by reason of the depletion of the soil. And even if allowed to go this far, the cultivation should be rigid, so that the soil should again be disturbed to a good depth, and the exposure of the earth, containing the dregs of the previous crop, be exposed to the oxydising and sweetening action of the sun and air. The plants should be kept thoroughly clean with the hoe, and the first rattoons will then yield a crop not much behind the first. After the second rattoons have been harvested, the ground should be thoroughly ploughed and manured again, and care taken to have the row where the drill formerly was, so that the plants this time really have fresh feeding ground, and this should be done at every alternate planting. Scientific agriculture is opposed to continuous rattooning, as it means the impoverishment of the soil to very little purpose. The best experts are against more than two crops being reaped without replanting and plentiful manuring. The various methods of disc ploughing and uses of other cultivators would take too long to detail here.

7.—Best varieties of cane: Different canes give different results in different soils and climates. In North Queensland some hundreds of different varieties of canes have been tried with more or less success, and the farmer can only decide for himself by experimenting on his own ground. It is generally admitted here that the Rappoe, commonly known as the Rose Bamboo, (because of its hard outer cover), is the best cane for the mill, containing the most sucrose and being the best disease resisting. As a farmers' cane, by reason of weight and length, the Tanna varieties are considered the best and are mostly grown in the north. Several New Guinea canes have been found to yield good results, while other good seedling canes are the White Bamboo, Singapore, Bourbon, and Demerara varieties, all largely grown and mixed in the same fields. There is seldom the careful selection of plants there should be, as has been already pointed out.

8.—Labour: For many years the great drawback to the proper carrying on of the sugar industry in Queensland has been the short supply of suitable labour. Experience among the cane teaches that beyond a doubt white labour is not suitable for field work; black labour must be employed. The South Sea

Islander predominates in the cane fields here, and of all the Kanakas the Solomon Island "boys" are preferable. When I speak of "field-work" I refer specially to planting, hoeing, cutting, and loading the cane. Here all ploughing and harrowing and all the more skilful work is done by the white man, it being against the regulations for the Kanaka to touch the plough or to be allowed to attempt skilled labour at all. The excessive heat and stifling closeness of the cane itself makes it almost impossible for the white man to stand the work of cane-cutting long, and where gangs of white men have been employed to cut and load the cane on the plantations when black labour was very scarce (all the Islanders having to be indented at the planters' expense) failure has inevitably been the result. I have known white men receive board and 2s. 6d. a ton as wages on the plantations for cane cutting, but they had to leave it. Javanese, Malays, and coolies mix with the Kanakas at this work, but with the cane-knife or the hoe the Kanaka is super-excellent for some reason or other.

The wages paid now are high, owing to the scarcity, good steady Islanders receiving £26 per year, paid half-yearly, being of course clothed and fed at the expense of the plantation, (two suits of dungarees per year). This amounts to 10s. per week, which is considered very expensive working, but the Kanakas can demand this owing to the diminishing number of them. A good Kanaka can perhaps cut and help to load four tons of cane per day, according to the thickness of growth, and whether the cane has been first "trashed" (stripped of long dry leaves).

9.—Number of labourers per acre: Latest statistics show that in the sugar fields one coloured labourer is employed for every ten acres under cane; that is, taking an all round average for all field work in which the Kanaka is employed on the plantations.

10.—Weight of cane and sugar produced per acre in a normal season: Naturally the yield of cane and sugar per acre depends altogether upon the quality of the soil, the method of cultivation, and climatic conditions, and even in the same district the differences in the yields would surprise the non-acquainted. The principle of obtaining good crops is this:—Plant cane wholly free from disease or which has inherited bad qualities, (which can be easily ascertained, of course, by examination), in land which has been thoroughly tilled and replenished with the necessary elements of plant food, and keep free from weeds. It is necessary to lay great stress upon manuring, even from the very start, and if careful cultivation is seen to, the harvest will every year abundantly repay labour and expenditure. In Queensland the average yield per acre has been reduced very low, and of late seasons has gone over 12 to 15 tons of cane. Good ground, and subjected to the attention already referred to, should not yield less than 40 tons of cane to the acre, and this, at the average price, 14s. per ton, cannot be considered a poor asset. In some districts in Queensland, years ago before the land was impoverished, 40 tons to the acre was a common crop; now it is an extraordinary yield. More than 60 tons to the acre was frequently recorded, but owing to deterioration in cultivation and the utter absence of manure on the land, those days have gone, though they may yet return under the new conditions insisted upon by Dr. Maxwell, the recently appointed sugar expert for Queensland. In Honolulu, where Dr. Maxwell revised the whole system of cultivation and manufacture of

NOTE.—The falling off of the crops of 1897-8 was wholly due to the great drought that lasted through the year. The crop 1898-9 also suffered through drought.

sugar, 120 tons to the acre is often realised. The following table will show the comparative yield of the Hawaiian sugar crops for five years as regards sugar, tons of cane not being reckoned here:—

Year.	Acres.	Total tons of sugar.	Yield per acre lb sugar.
1894-5	47,339 $\frac{1}{2}$	153,419 $\frac{1}{2}$	6,472
1895-6	55,729	227,093	8,184
1896-7	53,825 $\frac{1}{2}$	251,126	9,331
1897-8	55,235 $\frac{1}{2}$	229,414	8,306
1898-9	60,308	282,807	9,378

In Queensland for the past two years the yield of sugar per acre has only averaged a little less than two tons, but the following table, showing the yield of cane and sugar in the northern districts, will be more explanatory. The amount of cane taken to make a ton of sugar is also shown:—

*Northern Queensland Sugar Averages 1899*

DISTRICT.	Tons of cane per acre, crushed.	Tons of sugar per acre, crushed.	Tons of cane per ton of sugar.
Ayr	13.86	1.35	10.30
Bowen	11.93	0.90	13.27
*Cairns and Douglas	19.52	2.15	9.08
Ingham and Mourilyan	14.54	1.72	8.45
*Mackay	9.09	0.96	9.51

\* These are the largest and most important districts in the north.

It must be stated that 1899 was a very poor season; the density of the cane was low, the yield small, and the poor quality of the cane rendered it necessary that a great deal more than usual should go to the ton of sugar. With the improved methods of manufacture never more than eight tons of cane should be used per ton of sugar, though of course this is largely brought about by economical management. Good cane, well up in density and from an average crop, will not go higher than nine tons to one of sugar, and then the maceration would not be high.

11.—Cost per ton of producing cane in a normal season: Once the farm is established, the cost of producing cane under ordinary conditions may be reckoned at from 9s. to 11s. per ton, and at that, cultivation of the first order, to ensure an excellent crop, can be gone in for. The cost of manufacture has been reckoned at from 14s. to 15s. per ton with the most modern machinery. Of course every year the conditions may differ, but with cheap labour and improved machinery the cost of cultivation may be kept pretty well uniform and not above the highest amount stated. Every country must be guided by its own natural resources, labour, soil, and climate, and last, but not least, its practical conditions, which frequently place difficulties in the way which are only overcome by great patience and perseverance.

12.—Cost per ton of sugar manufactured in a normal season: The question has already been dealt with, and the cost stated at from 14s. to 15s. a ton. In Barbadoes the cost has been reckoned by experts at 5s. 5d. per ton, labour there being very cheap. In some of the mills here the cost of manufacture has gone as high as 17s. 6d. and even £1 per ton, but this should not be, provided fuel is to be reasonably obtained and ordinary economy practised.

Production can be easily kept down to these amounts with the most modern machinery. Of course, in some of the mills even now the equipment is not of the best, and the cost of manufacture every year is considerably over £1 per ton.

13.—From 7 tons 12 cwt. to 11 tons of cane are required to produce one ton of sugar as already stated. A good average is between 8 and 9 tons of cane to one ton of sugar.

14.—Machinery : This question is too exhaustive to deal with in limited space as so many different firms supply different parts of mill equipment, and there must needs be so many different kinds of machines in the mill. There are the roller engines, shredder, pumping "triple effect," filter presses, centrifugals, and vacuum pan, etc., and the makers are too numerous to mention here. Some well-known firms who supply sugar-mill machinery are the Sangerhauser Engineering Co. Ltd., Berlin, (Wehl & Co., Melbourne, Agents), Pott, Cassels & Williamson, Glasgow, Watson, Laidlaw & Co., Glasgow, Walkers Ltd., Maryborough, Q'land, and Smellie & Co., Brisbane. Communication with the Manager of Walkers Ltd., would secure particulars of all the different kinds of machinery required. The central mills, for the construction of which money is advanced by the Government through local companies, in which most of the principal farmers are shareholders, are all well equipped now, and the whole process of manufacture has been brought to a state bordering on perfection.

15.—Cutting : So far no machine has yet been tried with anything like success in the way of harvesting cane. A few machines have been experimented with in Queensland and a good many in the West Indies, but the great question of cane cutting by machinery has not been solved. Nor in the writer's opinion will it ever be successfully carried on, by reason of the fact that no receiver could ever be made adequate to bear the weight of as much cane as the length of a row of cane would mean, and because the cane has to be cut below the ground, about two inches. No stubble must be left showing, so nothing in the form of a knife would suit as worked by machinery. Again, only a poor crop could be harvested however strong the cutter or receiver might be, for, if the crop is any good at all, the stalks are lying all over the ground, and the cane resembles jungle. The cane bends over and twines in and out and is far too thick and heavy to get a machine or horses through. Cane cutting is done by hand, and this is the only sure method. A cane-harvester would undoubtedly be a boon if guaranteed to reap any great amount without continual unloading, but the necessity for getting below the ground, and the weight of the crop, have so far barred the passage to success.

#### *General Remarks*

There are so many other questions to deal with, especially under the new régime which has been inaugurated in the direction of scientific agriculture, improvement of canes by chemical selection, insect problems, fertilizing improvements, the progress of agricultural chemistry, methods of making use of the after products, and chemical control in the mills, etc., that the whole matter could only be dealt with even concisely by a series of articles on the cultivation and manufacture of sugar—say in Queensland. Under the questions suggested only the rudiments of the industry, so to speak, have been dealt with. The

writer would advise that Dr. Maxwell's report on the sugar industry in Queensland be procured and studied, so that in India the industry might be started if need be upon modern and improved lines at once, without the wasted experiences which have characterised the growth of the industry in this country. The presence of an expert to begin with could not but be advantageous to all concerned, and the money expended in such a manner, and by the establishment of a few experiment stations, would be well spent indeed and economical in the end beyond all first calculations.

[ Appendix No. 6 ]

*Notes on Sugar cultivation in the Straits by Mr. Jules Martin of Messrs.  
Hüttenbach Liebert & Co., Penang.*

1.—The area under sugar acreage in Province Wellesley is about 7,000 acres; in Perak, about the same, but the cultivation there is extending.

2.—The cost of cultivating and cutting per acre is about \$50.

3.—20 to 30 tons of clean cane without tops are yielded by one acre.

4.—Eleven tons of cane make one ton of sugar on a fair average.

5.—One and a half to two tons of raw sugar may be taken as the yield per acre on the average.

6.—Steam ploughing is not practised. At the present rate of wages hand cultivation is considered to be cheaper than the steam plough. A steam plough was introduced here some years ago for the purpose of ploughing paddy fields, but it proved too costly and was abandoned.

7.—The cane occupies the ground for twelve months.

8.—Manure : Fish manure, sulphate of ammonia, phosphates, guano, lime, pea and rape cake, Thomas' cane manure. The cost per acre is from \$15 to \$30 according to requirements.

9.—The rainfall is from 6 to 16 inches per month, yearly rainfall 90 to 100 inches. The greatest fall is in April and May, October and November, the driest months being January, February, March, and July.

Temperature 84° to 92° in the shade.

10.—Irrigation is not practised. The Perak Government are now undertaking a scheme for irrigation in the Krian district, but it is meant more for paddy cultivation.

11.—Method of planting : The canes are planted in trenches six feet apart, 2 or 3 inches deep, the tops being 18 to 24 inches from point of one to the other in the trench, planted nearly level. As the plant grows, the soil is moulded up from time to time until it forms a bank to support the cane, care being taken as the work progresses that the dead leaves are removed. About 4,000 tops will plant an acre.

12.—Varieties of cane : In Province Wellesley and Perak, only the striped Bourbon and the so-called yellow Mauritius are planted. The Otaheite is mere for eating and the Selangore has completely died out.

13.—Method of planting : Cuttings generally. Seedlings have been tried on a very small scale but have not been the success that was expected of them.

14.—Coolie wages : In Province Wellesley from 17 to 19 dollar cents per day, in Perak from 18 to 40 dollar cents per day. Tamils from the Madras Coast are employed. In importing them, the estate gives a free passage and other charges, amounting to about \$24 per head; house and water-supply are given gratis; in sickness, they are cared for in hospital and fed free of all charges, for which they agree to work 600 days, after which, they are free agents. It would pay an estate, to be free of these encumbrances, to pay 25 dollar cents per day to free men if they could be procured and depended upon to work regularly.

14.—A good coolie can easily cultivate an acre.

15.—The plantations vary in sizes from 100 acres up to 2,000 acres.

16.—Method of manufacture : As a rule, each estate manufactures its own produce. Two estates belonging to one Company now send all their canes to one factory. On some estates, Chinese squatters are encouraged to plant and sell the *juice* to the estate at a price per gallon. During the growth of the cane, the squatter is paid \$3 per month to supply himself with food, the advances being deducted on settling day.

17.—The cost of manufacturing per ton apart from cultivation and cutting is about \$15 to \$17 per ton.

18.—Machinery : Europeans use the very best machinery, consisting of double mills, rollers 7 feet long and 31 inches in diameter with engines of about 40 horse power driven by steam 60 @ 80lbs per square inch generated either in multibular or water tube boilers, steam clarifiers, juice heaters, vacuum pans triple effets, and Westons' centrifugals. Chinese use buffalo mills with stone rollers and boil their sugar in open pans, producing low class, namely, brown sugar. The outturn per day ranges from 1 ton on the small Chinese estates to 10—40 tons on the European estates.

*Production.*—The present production of sugar in Province Wellesley and Perak is estimated at 10 to 12,000 tons of white sugar no. I, 3,000 tons of white sugar no. II, and 10,000 tons of brown sugar. These are the only three kinds of sugar produced.

No. I white sugar has been contracted for at \$7 per picul, and no. II at \$5, while brown sugar sells at \$4—\$4½ per picul.

#### [ Appendix No. 7 ]

*Notes on Sugar Cultivation in Mauritius, by Messrs. Scott & Co., of Port Louis, dated October 4, 1900.*

1.—The average temperature and rainfall in the sugar growing districts varies considerably.

2.—Irrigation is resorted to, only in a few places. Water is taken from reservoirs and run into the fields. Water concessions are very difficult and complicated.

3.—Steam ploughing is not practised, the nature of the land not admitting of steam ploughs. In free soil without rocks, horse ploughs and hoes are used.

4.—The canes are planted generally in lines 4' 6" or 5' apart, in holes 15" or 18" by 9". Some planters prefer 15" x 15" where practicable. Cane tops, that is, the three or four top joints are planted, but sections of the cane containing two eyes each are often used.

5.—The employment and nature of manure depend on the soil; where there is abundance of lime, much chemical manure can be saved. For virgin cane 10 to 15 tons of stable manure is used, and 2½ to 4 oz. chemicals per hole. Nitrates are most important, with potash, and phosphoric acid according to soil.

6.—Cultivation before and after planting. The land must be cleaned and holed for planting; immediately after cutting, the fields should be cleaned up, the straw on the fields banked, and the young ratoons receive 2 to 4 oz. of chemical where needed.

7.—Many descriptions of cane are used, the principal varieties being Big Tanna, Port Mackay, Lousier, Iscambine, Bamboo, and Bois Rouge. Many varieties of seedlings have lately been introduced.

8.—The labour employed is that of Indian coolies under contract of service for 5 years at R5, 5·50, 6, 6·50, and 7 per mensem respectively, with rations.

9.—The number of labourers employed is, on the *area cut*, about one man an acre, where there is a factory. Where there is none, about one man to 2 acres, or less; it depends on the nature of the ground.

10.—In a normal season 30 tons per acre for virgin and 20 for ratoons is a good average yield. With sweet canes and a good modern mill, 10 per cent on the weight of the canes is a very fair yield.

11.—The cost per ton of producing cane in a normal season is R7 to R8 per ton delivered to the mill according to district and class of cane.

12.—Cost per ton of sugar manufactured: R100 per ton is very cheap, but occasionally done; R120 to R140 is a more frequent average; about R130 for the whole island.

13.—From 10 to 12 tons of cane are sometimes required to produce one ton of sugar, according to canes and mills; but generally a ton of sugar is produced from 9 tons and even less of cane.

14.—Machinery: modern sugar machinery, of the latest type, is alone worth mounting; the more powerful the factory the cheaper the cost of production.

15.—Cutting is done by hand labour.

## [ Appendix No. 8 ]

The Sugar Industry in the North-Coast District by J. A. Despeissis,  
M. R. A. C.—(*From the Agricultural Gazette of New South Wales,  
January 1891*).

The sugar-cane industry has been introduced for the last thirty years in the north-coast district, during which time it has experienced many fluctuations; and it may safely be said that it is only recently that this important industry has been placed upon a sounder basis, and is extending every year its scope and range of operations. After a hard and toilsome beginning the price of sugar suddenly went up so high, and reached such a figure (over £30 a ton) that many farmers who possessed a sufficient acreage of land put up a small sugar-mill and manufactured their own sugar instead of selling the cane to central mills. There was a sort of fever all along the northern rivers, and people who knew nothing of the sugar-cane, and of the extraction of sugar from its juice, boldly embarked in the venture; mortgaged their property, and obtaining money from banks, put up crude, inefficient, and quite inadequate small mills, which wasted more sugar than they actually manufactured.

On the price of the produce going down to the usual level again such mills could not crush any more to advantage, and some frosty seasons having set in, many of these properties fell into the hands of the banks, most of the mill-owners paying dearly for what little experience they had acquired in the manufacture of cane sugar. Just at present that industry is very flourishing under a system of small farms, and large central factories, where the canes are sold at a fixed price.

These central factories are mostly in the hands of a few powerful Companies, and though they grow canes of their own, most of their needs are supplied by their clients, who are paid a fixed and what I consider a handsome price for the raw material. The farmer, on the other hand, undertakes to grow a certain area of land, with varieties of canes approved by the companies for a stated period of years.

This system of having the two businesses entirely separate is by a long way the best so far as the sugar industry is concerned. The planter is thus independent of the fluctuations of the market, he has more time to give to the proper cultivation and improvement of his farm, and is repaid at the time of the cutting, on a settled basis, according to the nature of the season and the amount of industry he has displayed. The manufacturer, on the other hand, by treating a considerable quantity of cane, can put up powerful and efficient machinery, which will do the work more expeditiously, more efficiently, and more economically—three considerations of the utmost importance in the process of extraction of sugar from cane. He can, besides, by utilising the services of a qualified staff of chemists, boilers, and engineers, obtain the best possible results from his mills, and modify the grade of the produce according to the demand of the market.

From personal experience, I can state that the great mistake made in Mauritius, Réunion, and also in several of the West Indies Islands, where sugar

estates are larger than in New South Wales, and measure from 350 to 800 acres and more, was in the planters not amalgamating to put up central sugar factories but each one crushing and manufacturing his own canes. Thus it came to pass that many planters, with little or no agricultural, chemical, and engineering knowledge, had to face, almost constantly, difficulties beyond the training they had received. As a consequence, a great many of them sought advice from not always scrupulous agricultural chemists, or importers of costly patented machinery, eager to sell, the result being in many cases that all the profits made at the end of the season's crushing went to pay for the heavy manure bills, often quite inappropriate to the requirements of either soil and crop, and also the capital, with interest added, invested on the expensive pieces of machinery.

Besides these evils, others of a different nature severely handicap the sugar industry—that is, the free and easy way which characterises the working of the plantation and sugar-mill. Cane requires, unfortunately, to grow to perfection, a forcing climate, which has upon men an unmistakably depressing influence, and until lately, waste of energy and waste of material was of common occurrence. The great and prolonged crisis, which has menaced not long ago the colonial sugar industry, has, at least, had this good result, that things are now managed, on a great many sugar estates, in a quite different style than they used to be, and that planters are alive to the fact that to compete successfully against the sugar beet, they must show an equal degree of industry all through the period of cultivation of the cane and processes of manufacturing of the sugar.

I readily acknowledge that in all the various sugar-producing countries I have visited—either Mauritius, Reunion, or India—I have never seen such luxuriant canefields as those I have seen on the banks of the rivers and creeks of this North-Coast District, where crops weighing, when cut, 40, 50, 60, and 70 tons of canes fit for the mill, are of common occurrence. I was even shown a few patches, here and there, which yielded this season, more than 80 tons to the acre, and crops have been known of 100 and 105 tons to the acre, in particularly favourable seasons. These canes are from sixteen to twenty-two months old, and the heaviest crops recorded on the Tweed, the Richmond, and the Clarence Rivers have been from the varieties known as "Rappœ," or Fiji, and "Mauritius Ribbon."

The system of cultivation, however, with few exceptions, has nothing particularly commendable in itself, and it may be said that these satisfactory results are almost entirely due to the natural suitability of both soil and climate for the plant. As a rule, the farmer contents himself with giving to the land a shallow ploughing, 7 or 8 inches deep; he runs the harrow over the sods; places the sets in the furrows he has previously opened at distances varying from 3 ft.  $\times$  6 ft. to 5 ft.  $\times$  5 ft.; scarifies the land once and in more rare cases twice, then lets the plants grow. He often goes to the sugar-mill, with which he has passed a contract and gets an advance on his plantation; whilst the plants are growing he strips the dead leaves, or more often does not trouble to remove them. When the canes are ripe, the Sugar Company send round gangs of cutters and punters to take away the crop, which is weighed at the mill, and the farmer then gets a cheque for the balance of the money due to him, or for the whole amount of his crop's worth. The price paid by several mill-owners is exceedingly handsome, being at the rate of 10s. to 12s. per ton of cane, the Company doing the cutting and the hauling. It will be readily imagined that, at the rate,

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few crops giving so little trouble will be found more payable, in the North-Coast District. The hauling is done by bullock or horse carts, or in the Company's punts, which contain from 50 to 55 tons of canes. The canes are cut and put on the punts one day; the punts are taken to the mill the next day, and on the third day their contents are discharged on the cane carrier, which brings them to the rollers. When the distances are somewhat considerable, or if a Sunday intervenes, the canes are not crushed till four or five days after they have been cut, thus causing in hot weather, and with canes which have been injured, a notable interversion of the crystallizable sugar into glucose.

FIRST FORECAST OF THE OILSEED CROPS  
OF BENGAL, 1900-1901.

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THE following is published for general information.

F. A. SLACKE,

*The 25th February 1901.* Secy. to the Govt. of Bengal.

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DEPARTMENT OF LAND RECORDS AND AGRI-  
CULTURE, BENGAL.

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*First Forecast of the Oilseed Crops of Bengal, 1900-1901.*

*Explanatory.*—This forecast furnishes preliminary estimates of the area and outturn of the different varieties of oilseeds grown in this Province.

*Character of the season.*—The rainfall during the monsoon season of 1900 was capricious and irregular. In the Burdwan, Presidency, and Orissa Divisions it was exceptionally heavy, while in several districts of North and East Bengal, it was more or less in defect. The fall in September was copious and general, and in the three Divisions named above, it was so heavy as to cause a serious flood. In October, however, the fall was everywhere below the normal, while in November the rains practically ceased all over the Province. The fall in December was also deficient and badly distributed, and the rain in January and February has been somewhat in excess of the requirements of some districts. On the whole, the season has not been a favourable one for the oilseed crops, as they have suffered from an excess of rain in many tracts, while in others they have suffered from drought.

*Area sown.*—The normal area under the different kinds of oilseeds in these Provinces is returned by the local authorities as 4,014,700 acres, out of which only 3,645,600 acres have been brought under cultivation this year.

The difference is to a great extent to be accounted for by a reduction of area in the district of Hazaribagh by over 200,000 acres, due to a revision of figures in the current year. The Deputy Commissioner will be asked to revise his normal areas when submitting the final forecast. There has also been a decrease of nearly 100,000 acres in the district of Bogra.

The area sown with these crops last year was approximately 3,632,400 acres, with which the figures for the current year compare favourably.

*Character of the crop.*—From the annexed statement summarising the district returns, it will be seen that out of the 45 districts in the Province, only 11—Birbhum, Dinajpur, Darjeeling, Gaya, Saran, Champaran, Muzaffarpur, Bhagalpur, Hazaribagh, Manbhum, and Palamau,—anticipate an outturn of 100 per cent. or over. In 21 other districts, an outturn of between 80 and 99 per cent. is estimated, while nine others return a crop of between 60 and 79 per cent. The estimated outturn in the remaining four is below 60 per cent., Jessore, with 46 per cent., shewing the poorest outturn of all. For the Province, as a whole, the percentage, according to the district estimates, amounts to 87 per cent. of a normal crop. Making the usual allowance for the tendency to underestimate which is observable in many of the district returns, and in view of the nature of the season, it may be anticipated that 90 per cent. of a normal crop will eventually be harvested.

G. C. DUTT,

*Asst. Director of the Department of Land Records  
and Agriculture, Bengal.*

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(Countersigned).

P. C. LYON,

*Director of the Department of Land Records  
and Agriculture, Bengal.*

CALCUTTA,

*The 17th February 1901.*

## First forecast of the Oilseed Crops of Bengal, 1900-1901.

1 DIVISION.	2 District.	3 Total area of the district.	4 Total estimated area under cultivation.	5 Names of oilseeds.	6 Approximate normal area under oilseeds.	7 Approximate area sown last year (1899-1900).	8 Estimated area sown this year (1900-1901).	9 Taking 100 to represent the normal outturn per acre, how much represented the outturn last year (1899-1900)?	10 Taking 100 to represent the normal outturn per acre, how much will represent this year's outturn (1900-1901)?	11 Remarks by District Officers.	12 Remarks by the Department of Land Records and Agriculture, Bengal.
Burdwan	Burdwan	1,726,060	1,284,900	Linseed ... Rapeseed and mustard. Til { Rabi ... Til { Bhadai ... Other oilseeds ...	Acres. 28,200 23,700	Acres. 26,600 23,600	Acres. 25,000 21,500	100 99	83 69	Want of rain at the sowing time in the Kalna subdivision, and excessive rain in September last in the Katwa subdivision, have prejudicially affected the area and outturn of the oilseed crops.	
	Birbhum	1,121,920	900,000	Total ...	57,100	55,400	52,000	99	64		
	Bankura	1,577,430	640,800	Linseed ... Rapeseed and mustard. Til { Rabi ... Til { Bhadai ... Other oilseeds ...	800 2,000 400	800 2,000 400	800 2,000 400	75 75 75	100 100 100		
				Total ...	3,200	3,200	3,200	75	100	The last rain has done much good to the rabi crops.	
				Linseed ... Rapeseed and mustard. Til { Rabi ... Til { Bhadai ... Other oilseeds ...	1,000 7,000 2,700 3,300 8,000	1,000 8,700 3,700 4,100 7,600	1,000 9,000 3,700 4,900 6,600	88 88 88 88 88	75 75 75 75 75	Owing to the failure of the winter-paddy, an area in excess of the normal has been cultivated with oilseed crops during the year. The bad weather since the beginning of January has injured the outturn.	
				Total ...	23,000	25,100	27,200	88	75		

1	2	3	4	5	6	7	8	9	10	11	12
Division.	District.	Total area of the district.	Total estimated area under cultivation.	Names of oilseeds.	Approximate normal area under oilseeds.	Approximate area sown last year (1898-1899).	Estimated area sown this year (1899-1900).	Taking 100 to represent the normal outturn per acre, how much represented the outturn last year (1898-1899) ?	Taking 100 to represent the normal outturn per acre, how much will represent this year's outturn (1899-1900) ?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
BURDWAN (contd.)	Midnapore	3,292,800	2,190,600	Linseed ... Rapeseed and mustard. Til { Rabi ... { Bhadoi ... Other oilseeds ... Total ...	Acres. 15,000 30,600 20,700 10,800 21,000	Acres. 20,000 33,600 21,200 12,800 18,500	Acres. 20,000 33,100 21,200 12,800 18,500	80 78 84 87 82	77 69 86 77 69	The flood of September last gave good moisture and caused the extension of oilseed cultivation to a larger area than the normal. The outturn, however, has been poor this year on account of the rain in December and January.	
	Hooghly	1,087,360	702,300	Linseed ... Rapeseed and mustard. Other oilseeds ... Total ...	2,700 4,200 2,000	2,100 3,700 1,900	2,100 3,700 1,900	81 89 83	75 83 78	Rainfall in the latter part of December and in the first week of January, i.e., at the time of flowering, has affected the outturn.	
	24-Parganas	1,344,640	1,102,000	Linseed ... Rapeseed and mustard. Til { Rabi ... { Bhadoi ... Other oilseeds ... Total ...	1,600 1,200 800 400 3,000	1,500 1,200 800 400 3,000	1,000 900 800 100 2,000	100 100 100 100 100	53 63 79 69 60	The decrease in the estimated area and outturn as compared with those of the previous year is due to the want of seasonable rainfall in October last.	
DENOR.	Nadia	1,788,160	1,303,000	Linseed ... Rapeseed and mustard. Til { Rabi ... { Bhadoi ... Other oilseeds ... Total ...	55,000 40,000 14,000 3,000 15,000	42,500 37,500 9,700 3,200 8,300	33,000 26,700 7,300 4,400 8,800	80 86 73 72 83	65 62 58 75 67	The decrease in the area sown, and in the expected outturn is due to the heavy rainfall in September and to the absence of rain since then.	

District	Area	Area	Area	Crops						
				Linseed	Rapeseed	mustard	and	27,000	30,100	30,100
Murshidabad	1,373,440	985,500						19,000	23,500	23,200
								82	82	90
				Til { Rabi	...	5,700	6,400	6,200	83	91
				Til { Bhadoi	...	1,300	1,400	1,300	85	94
				Other oilseeds	...	14,500	13,600	13,700	82	90
				Total	...	67,500	81,000	80,500	82	90
Jessore	1,872,000	1,142,000						37,500	38,000	35,900
								85	86	87
				Linseed	...	51,400	45,900	45,100	86	94
				Rapeseed	...					
				mustard	...					
				Til { Rabi	...	26,600	25,600	23,600	86	93
				Til { Bhadoi	...	6,800	5,900	5,600	77	80
				Other oilseeds	...					
				Total	...	122,000	113,400	110,300	79	86
Khulna	3,103,942	870,000						4,700	5,200	5,200
								91	91	91
				Linseed	...	58,000	47,700	47,700	83	93
				Rapeseed	...					
				mustard	...					
				Til { Rabi	...	5,800	5,000	5,000	75	89
				Til { Bhadoi	...	1,500	1,200	1,200	75	76
				Other oilseeds	...	5,000	5,000	5,000	80	80
				Total	...	75,000	64,100	64,100	79	88
Rajshahi	1,663,040	1,262,100						5,200	5,100	5,200
								94	94	95
				Linseed	...	112,300	104,200	112,000	93	95
				Rapeseed	...					
				mustard	...					
				Til { Rabi	...	400	400	400	96	100
				Til { Bhadoi	...	3,400	3,400	3,400	90	100
				Other oilseeds	...	1,000	1,000	1,000	95	98
				Total	...	122,300	114,100	122,000	93	95
Dinajpur	2,526,080	1,687,600						100	100	100
								100	100	112
				Linseed	...	126,000	120,000	120,000	100	112
				Rapeseed	...					
				mustard	...					
				Til—Rabi	...	100	100	100	100	112
				Total	...	126,200	120,200	120,200	100	112
Jalpaiguri	1,894,600	1,075,000						27,000	28,400	27,500
								72	62	63
				Rapeseed	...					
				mustard	...					
				Til—Rabi	...	1,200	1,200	1,200	84	86
				Total	...	28,200	29,600	28,700	72	63

The decrease in outturn is due partly to late sowing and partly to the want of winter rain.

The recent rain is likely to prove beneficial to these crops.

The decrease in the outturn is due to unfavourable rainfall in the Alipore subdivision.

1	2	3	4	5	6	7	8	9	10	11	12
Division.	District.	Total area of the district.	Total estimated area under cultivation.	Names of oilseeds.	Approximate normal area under oilseeds.	Approximate area sown last year (1899-1900).	Estimated area sown this year (1900-1901).	Taking 100 to represent the normal outturn per acre, how much represented the outturn last year (1899-1900)?	Taking 100 to represent the normal outturn per acre, how much will represent this year's outturn (1900-1901)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
RASHANTI--contd.	Darjeeling ...	744,960	148,000	Rapeseed and mustard.	Acres.	Acres.	Acres.				
				Total ...	7,500	7,000	7,000	106	106		
	Rangpur ...	2,231,040	1,602,700	Rapeseed and mustard.	198,800	168,600	218,600	77	87	The outturn is estimated at less than the normal owing to want of rain.	
				Til { Rabi ...	1,300	1,200	1,300	77	87		
				Bhadoi ...	100	100	100	77	87		
				Other oilseeds ...	1,100	400	2,00	77	87		
				Total ...	201,300	170,200	220,200	77	87		
	Bogra ...	909,780	680,000	Linseed	15,600	15,600	1,900	63	49	Owing to the failure of the autumnal rain there has been a large decrease in the area sown this year with oilseeds, and unless sufficient rain falls shortly, the outturn will be a poor one.	
				Rapeseed and mustard.	87,000	87,000	14,700	63	50		
				Til—Rabi ...	14,000	14,000	2,500	63	43		
				Other oilseeds ...	2,000	2,000	200	63	37		
				Total ...	118,600	118,600	19,300	63	49		
	Pabna ...	1,176,960	882,500	Linseed	20,400	23,400	23,900	75	75	The increase in the area is due to the fact that a larger area has been sown with oilseeds in the Sirajganj Subdivision owing to the partial failure of the aman crops and a decrease in the cultivation of the jute crop.	
				Rapeseed and mustard.	110,000	116,100	132,100	50	80		
				Til { Rabi	25,500	25,000	25,000	75+	75		
				Bhadoi ...	7,500	5,000	5,000	75	75		
				Total ...	183,400	182,500	186,000	75	79		

District.	Area sown.	Area harvested.	Crop						Remarks.		
			Linseed	Rapeseed	mustard.	Total	Linseed	Rapeseed	mustard.	Total	
Dacca	1,780,480	1,213,500					7,700	4,900	5,200	50	50
			Linseed	Rapeseed	mustard.	Total	93,000	93,200	94,200	88	81
			Til { Rabi	... Bhadol	...		12,000	10,700	10,300	97	97
				3,200	3,100		3,200	3,100	3,500	96	97
			Other oilseeds	...	...		32,000	33,800	33,600	73	96
			Total	...	...		147,700	145,700	147,000	83	85
Mymensingh	4,052,480	2,405,700					33,000	35,700	36,200	80	80
			Linseed	Rapeseed	mustard.	Total	360,000	360,300	371,200	80	85
			Til { Rabi	... Bhadol	...		66,800	70,300	73,800	88	85
				7,200	2,400		7,200	2,400	2,500	68	75
			Other oilseeds	...	...		200	200	200	58	65
			Total	...	...		467,200	468,900	483,900	81	85
Faridpur	1,400,480	1,007,500					5,000	5,000	4,500	75	60
			Linseed	Rapeseed	mustard.	Total	42,500	42,500	40,000	75	60
			Til { Rabi	... Bhadol	...		1,000	1,000	1,000	75	60
				6,600	6,600		6,600	6,600	6,500	75	60
			Other oilseeds	...	...		4,500	4,500	4,500	75	60
			Total	...	...		59,600	59,600	56,600	75	60
Backergunge	2,335,960	1,408,000					15,000	20,000	20,000	95	95
			Linseed	Rapeseed	mustard.	Total	1,500	1,500	1,500	95	95
			Til—Rabi	...	...		25,000	25,000	25,000	100	100
			Other oilseeds	...	...		6,500	6,500	6,500	95	95
			Total	...	...		48,000	53,000	53,000	97	97
Tippera	1,594,880	1,158,400					6,500	5,500	5,700	77	86
			Linseed	Rapeseed	mustard.	Total	58,200	40,900	40,700	84	98
			Til { Rabi	... Bhadol	...		22,000	13,900	14,400	98	95
				8,800	5,500		8,800	5,500	6,000	92	91
			Other oilseeds	...	...		400	300	300	58	62
			Total	...	...		96,200	66,100	67,100	85	98
Noakhali	1,594,880	1,188,400					15,500	15,500	15,600	80	85
			Linseed	Rapeseed	mustard.	Total	6,400	6,400	6,400	85	85
			Til—Rabi	...	...		5,700	5,700	5,800	80	85
			Other oilseeds	...	...		800	800	800	60	65
			Total	...	...		28,400	28,400	28,600	81	85

The short outturn is due to the want of timely rainfall.

For want of rain in proper time the crop suffered; hence the outturn is estimated as less than the normal.

Want of rain and flood is the cause of decrease in the outturn as well as in the area sown.

The area sown this year is apparently normal in all cases, excepting in that of linseed, which is expanding in the Bhola Subdivision. The outturn of the crop is expected to be below normal owing to want of rain in December. Rabi til is reaped in June and it is now too early to say anything about it.

The Collector will be asked to revise his figures for normal area if necessary, before the final forecast.

The season was favourable to the early cultivation of these crops. If rain falls shortly a better outturn may be expected.

1	2	3	4	5	6	7	8	9	10	11	12
Division.		District.		Total area of the District.		Total estimated area under cultivation.		Names of oilseeds.		Remarks by District Officers.	
Chittagong (contd.).		Chittagong	...	1,594,781	606,900			Linseed	Acres.		
								... and	Acres.		
								mustard.	Acres.		
								Til			
								Rabi			
								Bhadoi			
								Other oilseeds			
								Total	Acres.		
								...	4,000		
									4,200		
									4,200		
									80		
									75		
Patna		Patna	...	1,332,560	293,600			Linseed			
								... and			
								mustard.			
								Til			
								—			
								Other oilseeds			
								Total	...		
								...	59,600		
									59,500		
									56,200		
									91		
									97		
Gaya		Gaya	...	3,015,680	3,207,500			Linseed			
								... and			
								mustard.			
								Til			
								—			
								Other oilseeds			
								Total	...		
								...	168,300		
									171,100		
									178,300		
									101		
									100		

The decrease in the outturn is due to the want of sufficient rain during the year.

PATA.	Shahabad	2,795,520	1,841,500	Linseed	10,200	9,200	10,200	73	95	This has been a favourable year for oilseeds.
				Rapeseed and mustard.	5,400	5,700	5,300	61	95	
Saran	...	1,696,087	1,382,500	Til—Bhadoi	800	600	700	65	80	
				Other oilseeds	5,600	2,200	5,400	61	75	
Champaran	...	2,269,840	1,364,000	Total	21,800	17,700	21,600	67	90	
				Linseed	26,000	26,800	26,800	89	120	
Muzaffarpur	...	1,941,254	1,555,300	Rapeseed and mustard.	23,000	23,000	23,000	92	120	
				Til—Rabi	300	300	300	87	120	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	3,000	2,200	2,600	100	120	Probably the recent rains have improved the prospects.
				Other oilseeds	8,900	10,300	10,300	83	120	
Total	...	61,200	63,000	Total	61,200	63,000	63,000	89	120	
				Linseed	61,000	61,000	61,000	100	100	
Champaran	...	2,269,840	1,364,000	Rapeseed and mustard.	24,000	24,000	24,000	100	100	
				Til—Bhadoi	5,000	5,000	5,000	90	100	
Muzaffarpur	...	1,941,254	1,555,300	Other oilseeds	1,000	1,000	1,000	95	100	
				Total	91,000	91,000	91,000	99	100	
Darbhanga	...	2,134,409	1,826,700	Linseed	41,200	41,200	41,200	89	100	
				Rapeseed and mustard.	7,400	7,400	7,400	90	100	
Total	...	54,900	54,900	Til—Rabi	300	300	300	90	100	
				Other oilseeds	6,000	6,000	6,000	90	100	
Darbhanga	...	2,134,409	1,826,700	Total	54,900	54,900	54,900	90	100	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	1,600	1,600	1,600	100	94	
				Other oilseeds	32,800	32,800	32,900	94	89	
Total	...	132,300	130,300	Total	132,300	130,300	132,700	97	84	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	1,600	1,600	1,600	100	94	
				Other oilseeds	32,800	32,800	32,900	94	89	
Total	...	132,300	130,300	Total	132,300	130,300	132,700	97	84	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	1,600	1,600	1,600	100	94	
				Other oilseeds	32,800	32,800	32,900	94	89	
Total	...	132,300	130,300	Total	132,300	130,300	132,700	97	84	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	1,600	1,600	1,600	100	94	
				Other oilseeds	32,800	32,800	32,900	94	89	
Total	...	132,300	130,300	Total	132,300	130,300	132,700	97	84	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	1,600	1,600	1,600	100	94	
				Other oilseeds	32,800	32,800	32,900	94	89	
Total	...	132,300	130,300	Total	132,300	130,300	132,700	97	84	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	1,600	1,600	1,600	100	94	
				Other oilseeds	32,800	32,800	32,900	94	89	
Total	...	132,300	130,300	Total	132,300	130,300	132,700	97	84	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	1,600	1,600	1,600	100	94	
				Other oilseeds	32,800	32,800	32,900	94	89	
Total	...	132,300	130,300	Total	132,300	130,300	132,700	97	84	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	1,600	1,600	1,600	100	94	
				Other oilseeds	32,800	32,800	32,900	94	89	
Total	...	132,300	130,300	Total	132,300	130,300	132,700	97	84	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,700	Bhadoi	1,600	1,600	1,600	100	94	
				Other oilseeds	32,800	32,800	32,900	94	89	
Total	...	132,300	130,300	Total	132,300	130,300	132,700	97	84	
				Linseed	47,700	47,800	48,500	100	86	
Total	...	132,300	130,300	Rapeseed and mustard.	49,400	47,600	49,900	97	78	
				Til—Rabi	800	800	800	100	94	
Darbhanga	...	2,134,409	1,826,70							

1	2	3	4	5	6	7	8	9	10	11	12
Division.	District.	Total area of the district.	Total estimated area under cultivation.	Names of oilseeds.	Approximate normal area under oilseeds.	Approximate area sown last year (1898-1900).	Estimated area sown this year (1900-1901).	Estimated area sown this year (1900-1901) to represent the normal outturn per acre, how much represented by outturn in last year (1898-1900) per acre.	Estimated area sown this year (1900-1901) to represent the normal outturn per acre, now much will depend on the weather.	Remark by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
BHAGALPUR.	Monghyr	2,509,440	15,83,800	Linseed ... and Rapeseed ... and mustard. Til—Rabi ... Other oilseeds ...	Acres. 5,000 8,500 400 8,000	Acres. 5,100 9,500 500 9,100	Acres. 5,100 9,500 600 11,700	90 90 76 83	97 91 93 83	The oilseed crops have been damaged to some extent by the recent rains.	
				Total ...	21,900	24,200	26,900	87	91		
	Bhagalpur	2,704,640	2,097,000	Linseed ... and Rapeseed ... and mustard. Til { Rabi ... { Bhadoi ... Other oilseeds ...	14,100 38,500 500 17,200	13,900 37,500 500 17,000	13,800 37,500 500 17,000	100 100 100 100	103 97 120 100		
				Total ...	72,400	65,600	71,000	100	100		
	Purnea	3,195,520	1,639,800	Linseed ... and Rapeseed ... and mustard. Til—Rabi ... Other oilseeds ...	12,700 182,500 100 2,200	12,300 141,000 100 2,200	12,200 143,000 100 2,100	92 88 100 97	96 96 100 97		
MAIDA.				Total ...	147,600	155,600	157,400	88	96	Late sowing and the unfavourable weather at the time of cultivation are the causes of the decrease both in area and in outturn.	
	Maida	1,216,000	672,800	Linseed ... and Rapeseed ... and mustard. Til—Rabi ... Other oilseeds ...	10,300 60,000 7,000 2,500	10,000 60,000 6,500 2,500	9,000 59,000 6,000 2,500	100 100 100 100	96 88 96 100		
				Total ...	78,700	76,500	67,500	100	90		

District	Par.	Area	Area	Cultivation							Remarks	
				Linseed	... and	Rapeseed	mustard	Til { Rabi	... and	Til { Bhadoi	... and	
Sonthal ganas.	3,500,160	1,795,100		12,500	9,600	11,000	85	80	88	68	68	The seeds sown did not germinate for want of rain at the outset, while owing to heavy rainfall in September some mustard lands could not be cultivated.
				Rapeseed	... and	mustard	Til { Rabi	... and	Til { Bhadoi	... and	Other oilseeds	... and
				84,100	76,300	72,800	75	75	77	69	67	
				1,600	600	2,200	90	90	90	87	87	
				5,100	5,100	5,800	94	94	94	87	87	
				98,800	96,300	92,500	84	84	84	87	87	
				Total	... and	203,200	187,900	185,200	84	84	78	
Cuttack	2,323,300	1,161,900		Linseed	... and	Rapeseed	mustard	Til { Rabi	... and	Til { Bhadoi	... and	Want of rain has caused a reduction in the cutturn.
				4,000	4,000	4,000	96	96	96	87	87	
				13,800	14,000	14,000	90	90	90	91	91	
				2,500	500	500	90	90	90	91	91	
				2,700	2,700	2,700	90	90	90	91	91	
				15,000	16,600	16,600	95	95	95	87	87	
				Total	... and	35,800	37,800	37,800	94	94	88	
Balasore	1,315,475	857,100		Rapeseed	... and	Rapeseed	mustard	Til { Rabi	... and	Til { Bhadoi	... and	The decrease in the total area and cutturn is due to the want of seasonable rain.
				6,800	6,800	6,200	100	100	100	90	90	
				600	500	400	90	90	90	90	90	
				1,500	1,100	1,100	85	85	85	95	95	
				500	1,300	1,700	90	90	90	95	95	
				Total	... and	9,200	9,800	8,300	96	96	87	
Angul	1,075,840	960,000		Rapeseed	... and	Rapeseed	mustard	Til { Rabi	... and	Til { Bhadoi	... and	Excessive rain during the sowing season and want of rain in October and November have injured the prospects of the crop.
				7,300	4,200	7,300	50	50	50	40	40	
				26,500	12,600	26,500	50	50	50	80	80	
				8,000	8,000	8,000	50	50	50	50	50	
				17,500	2,900	17,500	50	50	50	50	50	
				Total	... and	59,300	27,100	59,300	50	50	50	
Puri	1,582,720	812,300		Linseed	... and	Rapeseed	mustard	Til { Rabi	... and	Til { Bhadoi	... and	
				300	400	500	50	50	50	60	60	
				5,800	4,000	4,100	60	60	60	90	90	
				400	400	400	62	62	62	80	80	
				400	400	500	60	60	60	80	80	
				1,500	2,000	2,500	60	60	60	90	90	
				Total	... and	8,400	7,200	7,800	60	60	58	



Singbhum	2,52	756,700	Linseed	6,000	5,400	5,800	65	83	It is feared that the unusually heavy rain received in the early part of January will have seriously damaged the oilseeds. The extent of the damage is not yet known.
			Rapeseed and mustard	80,000	27,500	28,200	72	93	
			Til { Rabi	1,600	1,500	1,500	75	98	
			{ Bhadol	3,100	3,100	3,100	75	100	
			Other oilseeds	15,000	14,200	12,500	72	98	
Total				55,600	51,700	50,800	72	95	
Bengal	95,346,148	57,253,200	Linseed	669,500	653,200	635,400	85	86	
			Rapeseed and mustard	2,148,400	2,032,000	1,984,300	83	86	
			Til { Rabi	334,100	302,800	304,300	81	81	
			{ Bhadol	97,100	82,400	85,300	83	85	
			Other oilseeds	771,600	561,100	633,300	79	91	
Total				4,014,700	3,633,400	3,645,600	83	87	